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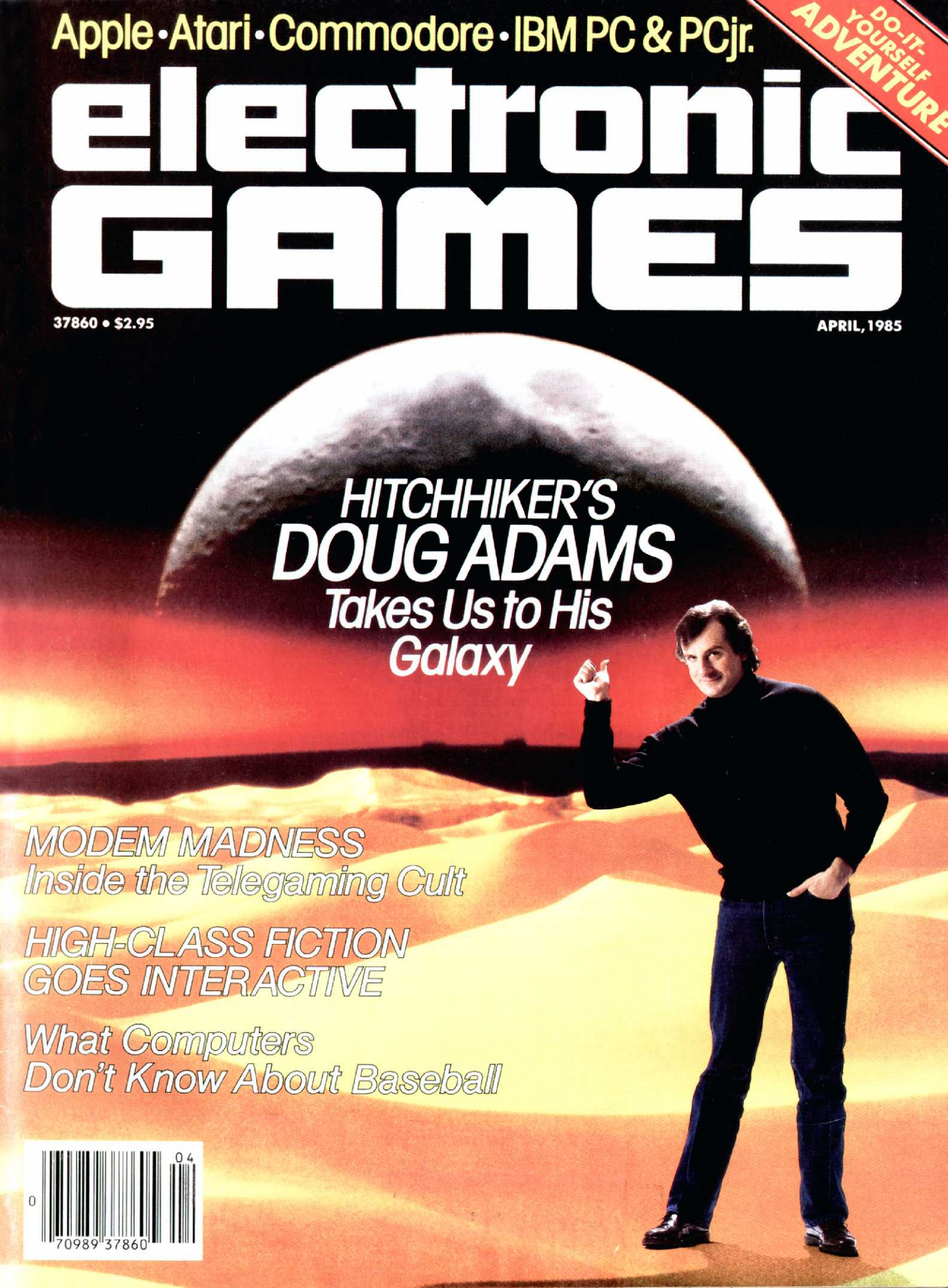
APRIL, 1985

HITCHHIKER'S DOUG ADAMS Takes Us to His Galaxy



MODEM MADNESS
Inside the Telegaming Cult

HIGH-CLASS FICTION GOES INTERACTIVE

What Computers Don't Know About Baseball

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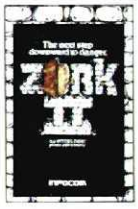
You gunned challenge
ZORK
I
INFOCOM


The next step
ZORK
II
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It all
comes down to this.
ZORK
III
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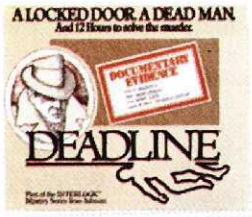
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SOMEBODY'S GOING TO TAKE THE DEEP SIX!

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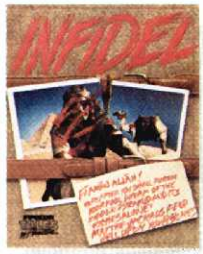

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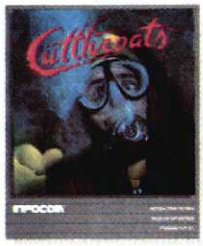

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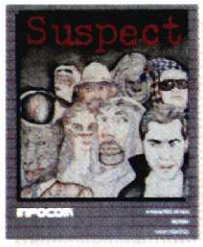

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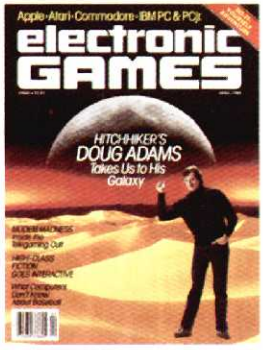

About Our Cover
You knew the man who wrote Hitchhiker's Guide had to be funny, right? Right.

Background photo: The Image Bank

Photo of Douglas Adams: Tom Weihs

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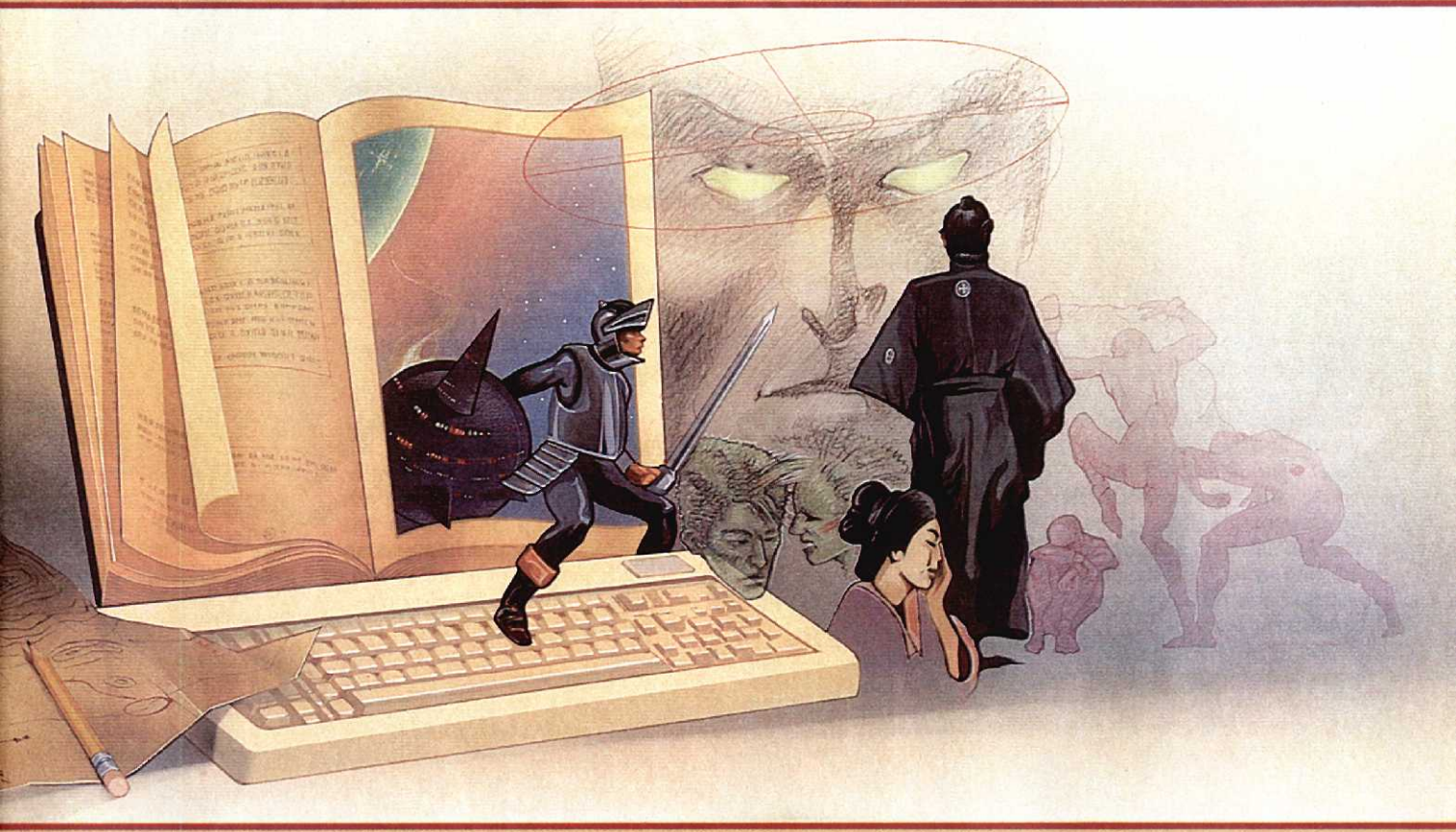

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electronic GAMES
Volume Three, Number Four
April, 1985

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On-Line

Thumbing An Electronic Ride

This month's cover subject should be familiar to adventure game aficionados. It is none other than Doug Adams, author, software designer, entrepreneur, hotelier, British *bon vivant*, and the creator of **Hitchhiker's Guide to the Galaxy**. At this writing, *Hitchhiker*'s is running a strong number three on the Softsel bestseller list, and anyone who has played the game knows why: it is not only a masterful work of interactive fiction, it is also the first program that intentionally lies to the player. I might also add that this is one diskette that has wreaked havoc with our deadlines. The travails of Arthur Dent seem to be booted up at some very odd times in the editors' offices here.

Our profile of Doug Adams was written by National Editor Roe Adams. Roe reports: "Doug is a delight to interview. I'll bet most people are unaware that he spends a lot of time with his friend, Terry Jones, of the famed Monty Python comedy troupe. They get their best ideas after they've hoisted a few at the local pub, and as you can see with Doug's books, his sense of humor is decidedly droll, a la the Pythons. And the Pythons, of course, are quintessentially British in their approach to satire and comedy. When a comedy club is opened in space — and I have no doubt that someday, they'll be commonplace — Doug Adams should be the guy to do it. He's incredibly funny, even when he's trying to be serious."

When he is serious he can be found puttering around his five home computers, the machine of choice being the Macintosh.

Managing Editor Louise Kohl, shown cavorting with our cover boy on this page, was also smitten by Adams. Something of an amateur comedienne herself, Kohl couldn't decide whether to first ask Doug about *Hitchhiker* or make a marriage proposal. Photographer Tom Weihs said his concentration was continually shaken by laughter as the two traded witticisms during the two-hour photo session. Still, we managed to bring you an incisive piece of reporting about one of the most talented and popular figures in science fiction comedy and computer adventure gaming. As for my own *Hitchhiker* experience? I can be found lying hopelessly in front of the bulldozer.

* * *

In recent years, one particular electronic gaming trend has been quite simple to identify. Computer software executives would keep an eye on the arcade scene and immediately translate a hit to either an Atari 800, Apple II, Commodore, whatever. The foundering arcade business has been humbled enough to begin to reverse the trend. Broderbund's very successful **Lode Runner** will be released in the U.S. by Digital Controls, Inc. as a coin-op upright. I'd also like to point out that Roe Adams designed two levels of **Championship Lode Runner**, *Mine* and *Pachinko*. (If you've ever been to Japan, you've heard of *Pachinko*, that nation's pinball-like parlor game.) *Lode Runner*, the arcade game, is a big hit in Japanese arcades.

Two and a half years ago, while I was in Japan, the big arcade game was Namco's **Pole Position**, a Grand Prix race car simulation. Tokyo teenagers, mostly boys, waited on very long lines to get to play it while electronic Mah Jong games were idle. Later, the game came to the U.S. and did quite well. Now, you can pop into your local gaming house and try a few different courses on **Pole Position II**. Keep your hands on the wheel.

—*Doug Garr*

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Attention

Effective With The May Issue On Sale April 11th Your Magazine Will Now Be Called

computer ENTERTAINMENT

Dear Reader:

One thing you've come to expect from *Electronic Games* magazine is our comprehensive coverage of all types of electronic entertainment—computer games, arcades, stand alones and programmable video games. No other publication can give you all the hottest information because no other publication is devoted to you—the gamer.

In keeping with our trend-setting reportage (we were the first magazine to cover the field), we have our fingers on the pulse of not only our readers but also our industry. This is an industry that has undergone profound changes and is still changing to meet your demands. You demanded more sophisticated games, and now we have more sophisticated games. But to achieve that end the hardware had to change. It evolved from arcade games and programmable video games to today's sophisticated home computers. If one trend stands out, it's that more and more of us will entertain ourselves with our computers in the near future. That's why we changed the name of *Electronic Games* to *Computer Entertainment.* We all feel the new name is more descriptive of the contents of our magazine. In addition, there will be other changes to reflect the evolution of our hobby.

To do it, we've assembled an editorial staff consisting of the finest and most knowledgeable people in the computer gaming area. Doug Garr, our editorial director, is the author of *Woz* — a biography of Steven Wozniak, one of the co-founders of Apple — and co-author of the *Complete Computer Compendium.* Garr is also editor of our sister publication *Video* magazine, the #1 magazine of home video. He has many exciting new features and columns ready for *Computer Entertainment.* (Look at the exciting line-up on the next page.)

Some of you already know that Roe Adams III has joined us from *Softalk* magazine. (*Softalk* was legendary among computer magazines — as well as Apple and IBM users—for its exciting and objective look at computer software.) Adams is a famous gamer in his own right, and is the recipient of several national awards for solving the most difficult text adventures. He'll be keeping his ear to the ground in the game designers' hideaways.

We're going to bring you other well-known writers, too, Ken Uston, the bane of casinos from Las Vegas to Atlantic City (he has adapted his blackjack card-counting routines to disk), will be reporting soon on all kinds of programs. Steve Bloom, our senior editor, is the former editor of *Video Games* magazine. He's followed Atari since the early days, and he spent most of his young adult years in arcades.

Computer Entertainment will continue to keep you up-to-date with the most comprehensive coverage available on all forms of leisure time software and game simulations. We'll tell you what we think is worthwhile, and we'll also steer you away from what's not. Most of all, you'll be able to rely on us for fair and factual reporting.

We invite you to join us for our inaugural issue, May 1985, on sale at your newsstand on April 11th. It will enlighten, brighten and engage you. It will reveal, as never before, the challenges that await you in computer software. But most of all, it will entertain you. Make a date — April 11th — for a new experience as we explore the excitement of *Computer Entertainment.*

EG readers:

HERE'S WHAT YOU CAN EXPECT IN UPCOMING ISSUES:

★ electronic sports special; what games the pros like and what they don't.

★ inside looks at some of software's hottest design departments.

★ in-depth profiles of the movers and shakers in computerdom.

★ a peek at the electronic games the Defense Department plays.

★ the next generation of flight simulators, including an exclusive ride on a real jet trainer simulator.

★ new columns on computer humor, hardware reviews, and future gaming predictions.

★ a report on electronic music and where it's headed.

★ plus much, much more.

On Sale April 11th

Reader Replay

KUDOS FOR ARDAI

I was pleased to see that Charles Ardai was finally given a full-length feature article ("Adventure Games: Is There Life After 'Game Over'?" *EG*, Jan.) I have enjoyed his reviews of video games in your magazine — they are one of its highlights. Mr. Ardai certainly has style, something that is difficult to recognize in articles about video gaming.

Michael B. Burstein
Forest Hills, NY

Ed: We'll pass along the message. For more of Charles' work, see the article "Booted Up Any Good Books Lately?" in this issue.

THE ROOT OF THE PROBLEM

I would like to say that I saw the game **Tapper** in a Las Vegas arcade, and after comparing it with **Root Beer Tapper**, I don't think that it could influence teens or pre-teens to drink beer. I don't think that Bally/Midway should have reworked the game as *Root Beer Tapper*.

Robert Layne
Houston, TX

Ed: Maybe so but we strongly believe that no one should be allowed to play **Pole Position** *too soon after playing* Tapper, *especially on an empty stomach.*

SWORDQUEST SNAFU

We are all aware of the recent acquisition of Atari, Inc. from Warner Communications by Jack Tramiel, late of Commodore. In obtaining Atari, Mr. Tramiel has taken on many of the remaining obligations left unfinished by the old order.

According to a source within the company's legal department, it is the intent of the new company to complete the "Swordquest Challenge." At this time, my concern centers around the **Waterworld** playoffs. *Waterworld*, the third game of the series, was indeed released, although in very limited quantities, and only through the now-defunct Atari Club. This is a violation of Atari's original promise; when started, the "Swordquest Challenge" was a nationally-advertised promotion, and both of the first two games appeared in retail outlets all across the country. There were also notable discrepancies in the earlier playoffs.

Atari's *Swordquest* Prize Medallion.

I urge all followers of the "Swordquest Challenge" to write or contact Mr. Tramiel, so we may find out what is going on.

I welcome any persons wishing answers to what is transpiring as far as "Swordquest" is concerned to write me.

Robert Ruiz, Jr.
164 North Blackstone #1453
Fresno, CA 93701

Ed: Mr. Ruiz had plenty more to say, which we unfortunately do not have space to print, so we urge those interested in the fate of Swordquest to write to him directly at the address given above.

ONE LAST GLITCH

I found a great glitch in the ColecoVision version of **Pitfall**. On the lower level of play, walk up to the brick wall. Get closer and closer to the wall until you can let go of the joystick and still hear the sound that indicates you are touching the wall. (This only works going to the left.) Wait about seven seconds, then push the joystick to the right, and Harry will turn around and do the moonwalk right through the wall. No kidding!

Pat Yagle
Omaha, NE

Ed: Thanks for one tip. That gives us an idea: What would you think about a Pitfall Harry Breakdance game?

CORRECTIONS

I was reading your December issue and came across a spelling error. The word "minor" on page 16, in the "Most Popular Computer Games" section, should be spelled "miner."

Michael Hill
Shorewood, IL

Ed: EG regrets this miner error.

COIN OPERATIONS

Back when people had to stand in line to play arcade game machines, it made sense (and dollars), for the arcade owners to set up the machines with a minimum number of lives and a high difficulty level so that the maximum number of quarters were snatched up. Now, most machines stand idle waiting for a customer. To quote **Space Fury**, "Is there no warrior mighty enough to challenge me?" The super-skilled players, having mastered the games at high difficulty levels, are bored and are finding other uses for their quarters. The rest of us, who would love to reach advanced levels in games, have just faced the fact that it would take too many quarters and have just given up. I would like to master **Dragon's Lair** or **Space Ace** but the odds just make it a waste of money to try. If I ran an arcade I would leave the machines at a lower difficulty level. So what if the average person gets to play

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Reader Replay

five minutes instead of 50 seconds? The more value the player gets for his money, the more likely he is to play again.

D.D
Hightstown, NJ

Ed: You've just put your finger on one of the reasons why people are switching to computer games: Once you lay out the money for the game, you can play as much as you like.

CLUBBING

In the Dec. *EG* you asked for information on computer clubs. This one's a lot to handle. We accept everyone with any computer or videogame machine. If interested send a self-addressed, stamped envelope to David Roth and the Mean Machines.

David Roth
3645 Summerdale Lane
Cincinnati, OH 45248

I'm the advisor for a computer club in Milwaukee called the Computer Information Exchange. We deal with Commodore, IBM and TRS-80 computers. We have three expert programmers who are always there when you need help on that program you just can't fix. We send out a newsletter with questions and answers. Please contact me at the following address:

John Rivett
9230 West Barnard Ave.
Greenfield, WI 53228

Alert, alert. . .There's a new Commodore group in town. We are called the Commodore Exchange. Our club is starting its own bulletin board system, and we'd like to get in touch with other C-64 users.

Commodore Exchange
106 Catalpa
Lake Jackson, TX 77566

PARSER PROFANITY

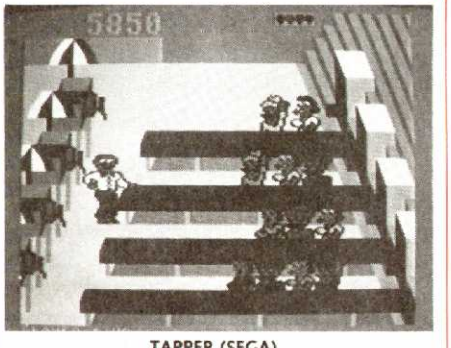
I've found that in the game **Zork I** there are a couple of four-letter words in its vocabulary. I can't tell you what they are (or you couldn't print my letter), but when you play *Zork* try some inventive commands and you will get a couple of funny responses.

Carl Caola
Cliftside Pk., NJ

Ed: (Expletive deleted.)

BIRDS, BEES AND SAFETY PINS

I just got *Tapper* for the Atari 2600. The instructions say that the third serving screen is supposed to be a punk rock bar. But the people there don't look anything like punk rockers. The closest there is to a punk is a girl with a tail on the Sports Bar screen. Also, every time you clear a screen the dancing



TAPPER (SEGA)

girls appear, kicking their legs to the side. But once or twice during their dance they raise their left or right leg all the way up to their hands. Why does this happen?

Joey Kovacs
New York, NY

Ed: What color is the tail? And about the dancing girls: just a little fancy electronic choreography for your viewing pleasure.

ULTIMATUM DEPT.

If you don't print this I will write it on my PC and send you a couple hundred copies.

Kyle Smith
Charles Town, WV

Ed: It's amazing what you can do with a PC.

STILL NOT KOSHER

In 'Tops 'n Flops" (*EG*, January), you gave the Not-Quite-Kosher Medallion to Fox Video Games for making **Porky's**. "Look on the bright side," you wrote, "Fox's videogame fold-up probably saved us from **Porky's II**." Well, I don't see the bright side. *Porky's* wasn't designed by 20th Century Fox, but by Laser Micro Systems. They should get your dubious medallion.

Robert Vierra
San Jose, CA

Ed: You're right: let's thank everyone responsible for not bringing us a Porky's II videogame.

WHAT ABOUT BULGARIA?

Personally, I think you have the finest publication in the free world.

Steven Preston
New York, NY

Ed: Tell that to Robert.

APPLE ADVOCATE

As you reported in "Player's Guide to Microcomputers" (*EG*, December), most games developed for the Apple IIe and II+ are slightly inferior to their Atari and Commodore 64 counterparts. However, I believe it was unfair of you not to mention that programs made specifically for the Apple (using the full memory capacity and high-resolution graphics) are superior to the Atari and Commodore versions. An excellent example is Spinnaker's mouse-controlled **Grandma's House**. Just setting the record straight, OK?

Khaled Rafih
Calgary, Alberta

THE EASY WAY HOME

Here's a hint for anyone who's tired of never getting to Earth in **Blockade Runner** by InterPhase for ColecoVi-

sion. As soon as the game starts, hold the joystick forward, so that the ship moves to the top edge of the asteroid belt. Also hold the right-hand fire button, for full speed. The asteroids will avoid you. Ignore the space mines, and just go for the blue ice crystals, returning to the top of the screen when you get them. You can make it to Earth this way without even firing a shot.

David Jackson
Hill AFB, Utah

Ed: Does NASA know about this?

SPY HIGH

I've discovered a way of scoring thousands of points on **Spy Hunter** by Midway for the Commodore 64. When the game begins, you will be let off onto the grass by a truck on the right side of the road. Pull over to the side by pushing forward on your joystick. At first you'll shudder on the grass, but keep moving right to the edge of the screen until you stop shuddering. Now nothing will affect you, neither the water nor the grass. Ride there until you have enough points and then slowly push back onto the road. Beware of the limo and the evil helicopter. And if you want to get past the broken bridge, you have to enter the water.

Alex Wellen
Stratford, CT

Ed: But what would Bond think?

REVIEW RESPONSE

I enjoy the "Computer Gaming" section of your magazine, but I've got one complaint with it. Sometimes when you review a game you don't list all the computer systems the game is available for. It would be a great help to me and probably many others if you listed all the systems that products are available for.

Michael Powell
Institute, WV

Ed: At the time that a game is reviewed, we try to list all the systems it is available for, but often games come out for other computers later. We're going to start listing new translations in the Review Section as we hear about them. If the new translation is very different from earlier versions, we'll take another look at it.

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HOTLINE

ATARI, COMMODORE CLASH AT CES

Asked at a CES press conference about Commodore's new 128PC computer on display in the Convention Center, Atari chairman Jack Tramiel snapped, "I didn't see any new products there." Tramiel, who built Commodore into an industry giant before moving on to Atari, was too busy gloating over his company's products: the 65XE (another name for the 800XL) and two 16-bit machines, the 130ST and 520ST, that quickly earned the moniker, Jackintosh.

It would be safe to say that Atari stole the show. Atari are the first Mac-type computers to hit the market. The kicker is that Tramiel is promising they'll sell for $399 and $599, respectively. (The XE will cost $120, a disk drive $200.) Other ST features include: 192K ROM (expandable to 320K), three graphics modes, 512 colors, three channels, MIDI interface, a 65-key keyboard and 18-key keypad, six ports and a mouse. The 130 has 128K RAM, the 520 comes with 512K. Like the Mac, these new computers are "closed" systems — meaning there are no additional ports.

Also looking to position itself in the high end of the personal computer market is

The Commodore 128.

Atari's 130ST computer.

loyalists were pleased to hear that the XE is compatible with Atari software, and the STs could very well put a crimp in Apple Mac sales. Driven by the speedy 68000 microprocessor and operated by the window-driven GEM system, the STs

Commodore, with its 128PC. Fully compatible with the C-64, this new machine boasts 128K RAM (expandable to 512K), 64K ROM, CP/M compatibility, built-in Basic, 16 colors, a 78-key keyboard and 14-key keypad, and seven ports. Purchased with a disk drive, the cost is expected to be less than $600.

Even with the introduction of a new computer, Commodore was unable to prevent rumors over the much-awaited Amiga from flying at CES. Many had expected Commodore to be showing the machine, which it had bought from Amiga Inc. last year. But it was conspicuous by its absence. An Amiga spokesperson, Don Reisinger, acknowledged that the computer wouldn't be ready until late spring, saying that Commodore is in the midst of "enhancing" it. "The Amiga is more of an Apple II-type product," he commented. "It's very personal and open, it appeals to your senses. It's really different; it's not the Mac Killer you've been hearing about."

As for Jack Tramiel, he plans to appeal "to the masses" with his new Atari line, just like he did with the VIC-20 and C-64. Predicting that Atari will sell five million computers in 1985 (half XEs, half STs), Tramiel fired this last volley: "If I have to tell you why you should buy a computer, then you should go to IBM. We are selling personal computers to the individual. He or she is my boss."

SIGNS OF THE TIMES

Newsroom novices certainly could stand to take a few lessons from *The New York Times*, America's mightiest morning daily. But, in the January 14 edition, *The Times* provided a lesson in contradictory journalism. While the front-page story, "College Students Flock to Computer Science," reported that enrollment in computer science programs is growing "so rapidly that some schools must limit admissions," another story in the same edition countered that "the number of (college freshmen) pursuing careers as programmers or analysts declined: 6.1 percent, down from 8.5 percent last year and 8.9 percent in 1982." This information was attributed to a survey of 180,000 freshmen conducted jointly by U.C.L.A. and the American Council on Education.

Universities such as Northeastern in Boston have seen a significant rise in computer science enrollments. Northeastern's dean of the College of Computer Science, Paul Kalaghan, told *The Times*, "These are young people who have been brought up on videogames, and there is a romance in computers for them."

ALL THE NEWS THAT FITS YOU PRINT

No news may be good news, but Springboard's **Newsroom** double-disk program (for Apples and IBMs) is great news for would-be writers, editors, and art directors whose dream is to publish their own newspaper-style gazette. Start by writing stories using the built-in word processor, then top them off with headlines selected from a variety of typefaces. Add any of 600 pieces of "clip art" from the Photo Lab to the page and rearrange the layout to your

Edited By STEVE BLOOM

satisfaction. When it's time for the presses to roll, simply print it out.

Newsroom's best feature, however, is the Wire Service function, which allows you to send and receive text from computer to computer (an Apple IIe to a PCjr, for example), so long as you have a modem. Imagine receiving articles from a network of correspondents all over the country? Who needs AP and UPI when you can have *The Newsroom*?

SIGNS OF THE TIMES II

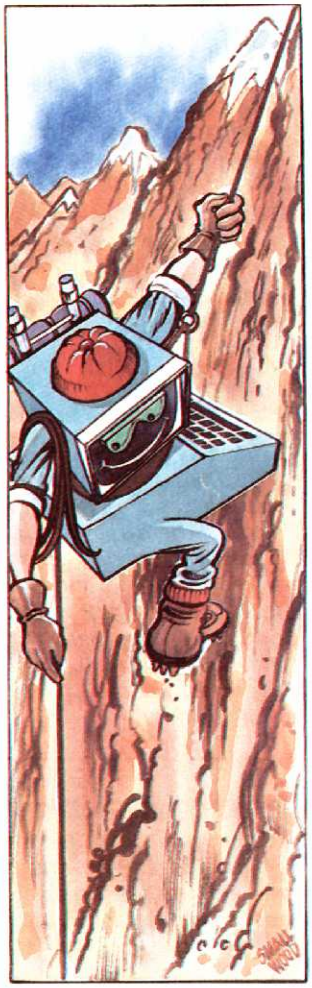
For some young people who've grown up playing videogames, pursuing a computer-science degree is about as farfetched as the **Zork** storyline. You may remember how the four teenagers who were shot last December by New York's celebrated "vigilante" Bernhard Goetz were planning to stop off in Times Square and steal a few thousand quarters from arcade machines that day. "To tell you the truth," Carl Canty, the older brother of Troy, who was one of Goetz's victims, said to a *New York Post* reporter, "He go downtown to rob **Pac-Man** machines.

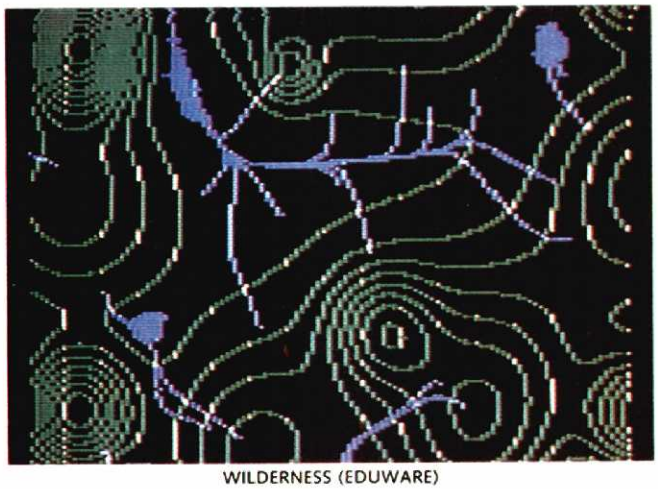
"We get $500," Canty continued, "but now people empty (the machines) out early. We go down to the white people's stores — the Mafia stores. All they do is call the cops. If the police come, it just a misdemeanor. We don't go to Harlem because they beat you up in Harlem."

Troy Canty and his three friends were carrying sharpened screwdrivers when they allegedly accosted Goetz. With a screwdriver, Carl said, you can break into a *Pac-Man* machine in two minutes.

STIMULATING SIMULATIONS

Thanks to complex and exacting programs like Sub-Logic's **Flight Simulator II**, simple simulations are now things of the computer gaming past. Attention to detail is key, accuracy of the upmost importance. In Mindscape's **Halley Project**, for example, electronic planets, stars and moons move at the same speeds and travel in the same orbits as they actually do in the solar system. The object of this space simulation, which was created by author Tom Snyder, is to qualify for the project by successfully completing a series of navigational tests. Among the cosmic data you will be inundated with along the way are details about Halley's Comet, which is scheduled to make its final 20th century appearance late this year through early 1986.



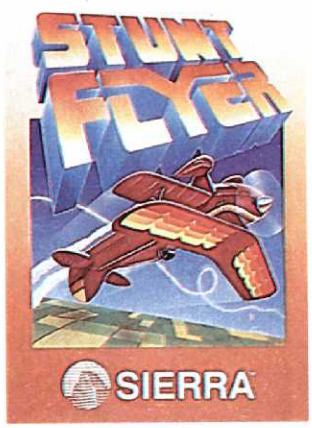


WILDERNESS (EDUWARE)

Back on Planet Earth, EduWare's **Wilderness** tests your survival skills in a program prepared by two Cal Tech scientists. Just imagine yourself as the sole survivor of a plane crash, wandering through the desolate reaches of the Sierra Nevada mountain range. All you have is a topographical map, your instincts and whatever you can carry to assist you in reaching a ranger post before exposure, starvation, and any a number of complications that render you helpless. Weather conditions, plant and animal life, changing terrain, and human physiology are all figured into the program. In addition, EduWare is selling supplementary disks which allow you to explore such exotic areas as Burma, Bolivia and New Guinea.

Racing fanatics, meanwhile, will be thrilled to discover that stock car champ Richard Petty can now be challenged — at least on a computer screen — in **Richard Petty's Talladega** by Cosmi. The game features 19 cars, one of which is Petty's, a driver who has won more than 200 NASCAR races. The other 18 all have personalities — some like to block, others get kicks out of bumping you off the speedway — but it's Petty's car that will keep you up nights. He is so difficult to beat — incidentally, the game was developed with the assistance of Curb Racing (Petty's team) — that, according to Cosmi, Petty has yet to outrace himself. Believe it or not.

Cosmi is also offering **Super Huey**, a helicopter simulator, but if you really want to do tricks in the air, take a look at Sierra On-Line's aerobatics program, **Stunt**



HOTLINE

Flyer. Instructions for 20 maneuvers are included, such as simple loops and rolls, though in little time you probably will qualify for the competition, which is judged by the program according to International Aerobatic Club standards. Those familiar with stunt flying will recognize the plane as a Pitts Special. Another key feature is replays, so you can watch yourself in action. A $1000 prize will be awarded to the computer flyer who performs the best stunts. Send a copy of your disk to Sierra, where it will be judged by stunt pilot Al Geringer.

The weirdest simulation of the month has to be Epyx's **FBI** game. Here's how it's described in the company's literature: "You're an aspiring FBI agent faced with the challenges and rigor of the FBI qualifying course. How will you score on the combat firearms range, in hand-to-hand combat, on the physical fitness course, and in criminal detection and identification? Only the best make it through. Can you cut it?" Just think of the possibilities if *FBI* cuts it: the KGB game, the CIA game, the Mafia game. . .As always in computer gaming, the possibilities are endless.

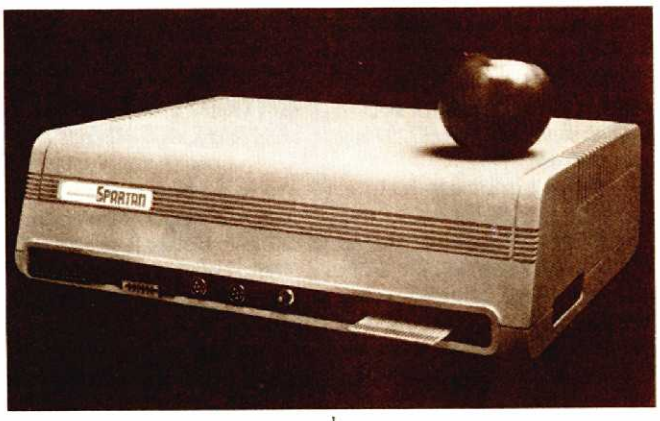
IMAGIC IN THE AIR

Imagic is alive and well and developing creative software for distribution by Bantam Software, the electronic publishing arm of Bantam Books. Of considerable note is the "Living Literature" series, which has debuted with two titles: Sherlock Holmes in **Another Bow** and **I, Damiano**. The former is a completely new Holmes tale that takes you aboard the S.S. Destiny where you'll meet such early 20th century luminaries as Thomas Edison, Lady Astor, and Louis Armstrong. With Watson grumbling at your side, you as Holmes must solve a variety of mysteries.

Based on R.A. MacAvoy's trilogy, *I, Damiano* sweeps you back to the 14th century in a role-playing fantasy of epic proportions. You'll also travel back through time in Imagic's adaptations of H.E. Wells' *Time Machine* and Shakespeare's *Macbeth*. The latter is packaged with the actual play. In *The Time Machine*, you'll journey to the forbidden world of the Morlocks and fight to regain your machine. Both *Macbeth* and *The Time Machine* are only distributed by Imagic.

GREAT EMULATIONS

What's the difference between a mimic and a clone? A mimic has personality, which is what Mimic Systems is offering Commodore 64 owners with its $599 Spartan package. Spartan comes with



three cards — BUSS, CPU and DOS (they can be purchased separately) — that will upgrade your C-64 to an Apple II-plus. It offers total software and hardware compatibility with Apple-designed products, eight decoded peripheral slots, one non-decoded 8-bit peripheral slot, 64K bytes of RAM, a 6502A microprocessor, and a non-dedicated 8-bit parallel port, among its numerous features.

"What happens when the

C-64 owner wants to use more hardware or software?" asks Mimic's president David Perras. "The owner is forced to upgrade. Spartan lets that owner upgrade to the world of the Apple II-plus without losing the investment that's gone into the 64." For more information, call: 1-800-MODULAR.

ROCK THE HOUSE

It had to happen: With the Commodore 64's terrific music-producing capabilities and its decent graphics capacity, someone was going to come along with a make-your-own rock video program. Sight & Sound did: a two-disk **Music Video Kit** that allows you to start from scratch. You can create characters and backgrounds, or choose from a library of 50 characters (from robots to breakdancers to musicians) and 12 backdrops until you're ready to store the video. Then you add the sound — again, you can write your own music or select from a number of pre-programmed songs — and mix the two into your own, personal music video. The *Music Video Kit* is compatible with S&S' **Music Processor** and **Computer Song Albums** disks.

Tech Sketch is developing a similar program to be used with its Music Port keyboard. The company also has a more ambitious music video product in mind: You'll need a VCR, a video camera, the C-64, Music Port, Tech Sketch's **Music Composer** disc and light pen and, of course, a TV. Go out and shoot some video, then run it through the VCR into the TV, create a song with the Music Port, and voila, you've got your own honest-to-goodness music video. The cost? Don't ask — just think MTV. Tech Sketch just might take you there.

PRESENT COMPUTING

Prospective computer owners will spend between

$500 and $2000 this year on personal computers according to a survey of 1200 consumers conducted by Future Computing. Forty percent of those surveyed indicated they planned to buy a computer in 1985. In a related survey, Software Access also detected a trend toward higher-end computers, but discovered that home computer use has a long way to go before it eclipses TV as America's favorite home-entertainment activity. On the average, Americans watch 30-40 hours of television per week as compared to 12 hours of computer use.

Future Computing will host a series of seminars focusing on the personal computer industry this spring. Each two-day seminar will take place in Dallas at the Westin Hotel, with registration at $800 per person. The dates are: March 26-27, April 23-24, and May 29-30. For more information, call (214) 437-2400.

GETTING THE HINTS

Stuck in a room with this damn fish flying around like a mosquito? Can't figure out how to stick it in your ear? Stop pressing the help button. Call 1-800-262-6868 and order your Infocom hint book — just name the game that's got you stumped — for $7.95. Same goes for either of Hayden's Time Quest adventures, **The Holy Grail** or **Inca**. Call 1-800-343-1218 and help — in the form of a book titled, *Road Atlas and Travel Guide* — will soon be on its way.

CATCH AS KAT CAN

As far as Koala Technologies is concerned, the mouse can crawl right back into its hole. The company's latest innovation, called KAT (an acronym for "Koala's Answer To. . ."), is intended as a

replacement for the mouse-based technology that has dominated the personal computer scene for the last few years. KAT is based on the Koala Pad touch-tablet and is compatible with the IBM PC, Apple IIc and Macintosh. It will be available in April and will sell for less than $200.

Two reasons for KAT, according to Koala: It doesn't require a large, open space on a desk to be used; and it offers precision cursor positioning when the tablet is touched with a stylus or fingertip. "Pointing makes computers easier to use," says Koala president Jeffrey Heimbuck. "KAT is the closest thing to an electronic pen and piece of paper that a computer owner can use."

Also, look for Koala to release a new animation device in the coming months. It is being developed by Steve Gibson, who's best known for his light pen.

GET A LOAD OF THIS

Several issues ago we offered a half-dozen suggestions for what to do with your time while the Commodore disk drive painstakingly loads a program into the C-64. Surely, you've followed EG's advice and made a few "duty calls" during the procedure since then — or, perhaps, you've run out and bought **Kwik Load** or **1541 Flash**, both cartridges that dramatically speed up the loading time.

Now, Epyx is marketing **Fast Load**, another cartridge that the company promises is even speedier than its predecessors. With *Fast Load*, Epyx claims, you can load, save and copy disks five times faster than usual. It also lets you copy single files and whole disks, send disk commands and list directories Best of all, it works with most programs, even copy-protected ones.

AN MSX RATING

The response to the MSX booth at CES, meanwhile, was decidedly skeptical. No fewer than 10 Japanese manufacturers displayed low-end computers, all of which are compatible. The majority don't have disk drives included and contain only 64K RAM. Only Konami — which distributes MSX software in Europe and Japan — had prepared software for the show, though Activision, Infocom, Broderbund and Spinnaker have made commitments to convert their best-selling titles for MSX machines.

Sony's Hit Bit computer looked relatively promising. One feature — the Remote Controller cartridge — lets you give instructions that will activate other components in a "home entertainment center." For example, you can tell your VCR to record a particular program at a particular time, or just record, rewind, playback. Or program the "center" so that your favorite radio station goes on at a certain time. Another feature — the Superimposer — lets you write and draw on the screen while the TV or video camera is being used. All this for less than $200.

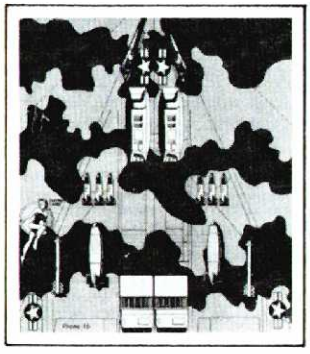
Why the skepticism then? Clearly, American computer buyers have been stepping up lately, not down; MSX may be a step up in Japan and in Europe, but here, with its 64K of memory, it's down all the way. Even when the 16-bit MSX machines arrive here next year, it'll be too late to take advantage of the U.S. computer boom. The industry stance on the machines is cautious, partly because of the time lag between European and US distribution.

Panasonic's entry in the MSX market.

HOTLINE

CAPTIVATING CONSTRUCTIONS

A best-selling book does a computer game make, especially if it's designed to take advantage of the Macintosh's graphic powers. Simply combine Simon and Schuster's **Great International Paper Airplane Construction Kit** with **MacPaint** and you'll find yourself enhancing the planes that

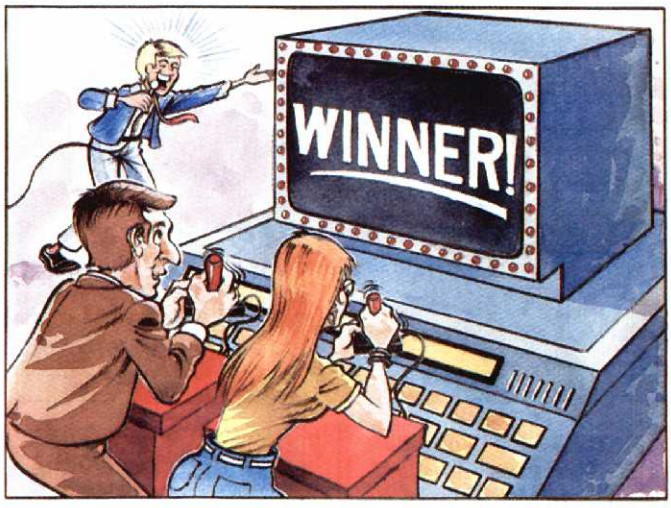


come with the kit, adding a logo here, an insignia there; even pilots and attendants can be drawn to meet your custom design. Then print the plane out on an Imagewriter, fold, and let 'er fly. Hints on folding designs come included with the kit, which will be available in May.

Another novel experiment in this ever-growing genre is Hayden's **Computer Novel Construction Set** (Apple, IBM, Mac). Described by the company as a "do-it-yourself interactive fiction adventure," *CNCS* is a tool that allows would-be adventure writers to create landscapes, characters, rooms, travel paths, and real-time events. It also lets you develop a custom vocabulary and includes a sample adventure to guide you along.

Not to be outdone, the originator of the first-ever construction sets (**Pinball** and **Music**), Electronic Arts has added three more to its software catalog: Like the Hayden program, **Adventure Construction Set** gives you the chance to create your own adventure, consisting of up to 240 rooms, 500 different creatures and 7500 props. You can draw your own graphics and cast 13 kinds of spells as well, or instead play any of the eight built-in adventures, which includes Stuart Smith's *Rivers of Light*. With **Mail Order Monster**, you get to fashion your own monster out of 12 different stocks before going off to battle on the Volcanic Plain. And with the cleverly-titled **Racing Destruction Set**, you can customize your car and build a racetrack — complete with jumps, hills and hairpins — before going off to the races, and challenging the master.

HUMBABA
KING'S CHAMBER
THE WITHERING GAZE OF THE HORRIBLE BEAST MAKES YOUR BLOOD RUN COLD AND YOUR LIMBS STIFFEN IN SHEER TERROR.
PRESS BUTTON TO CONTINUE.



ADAM DROPS OUT

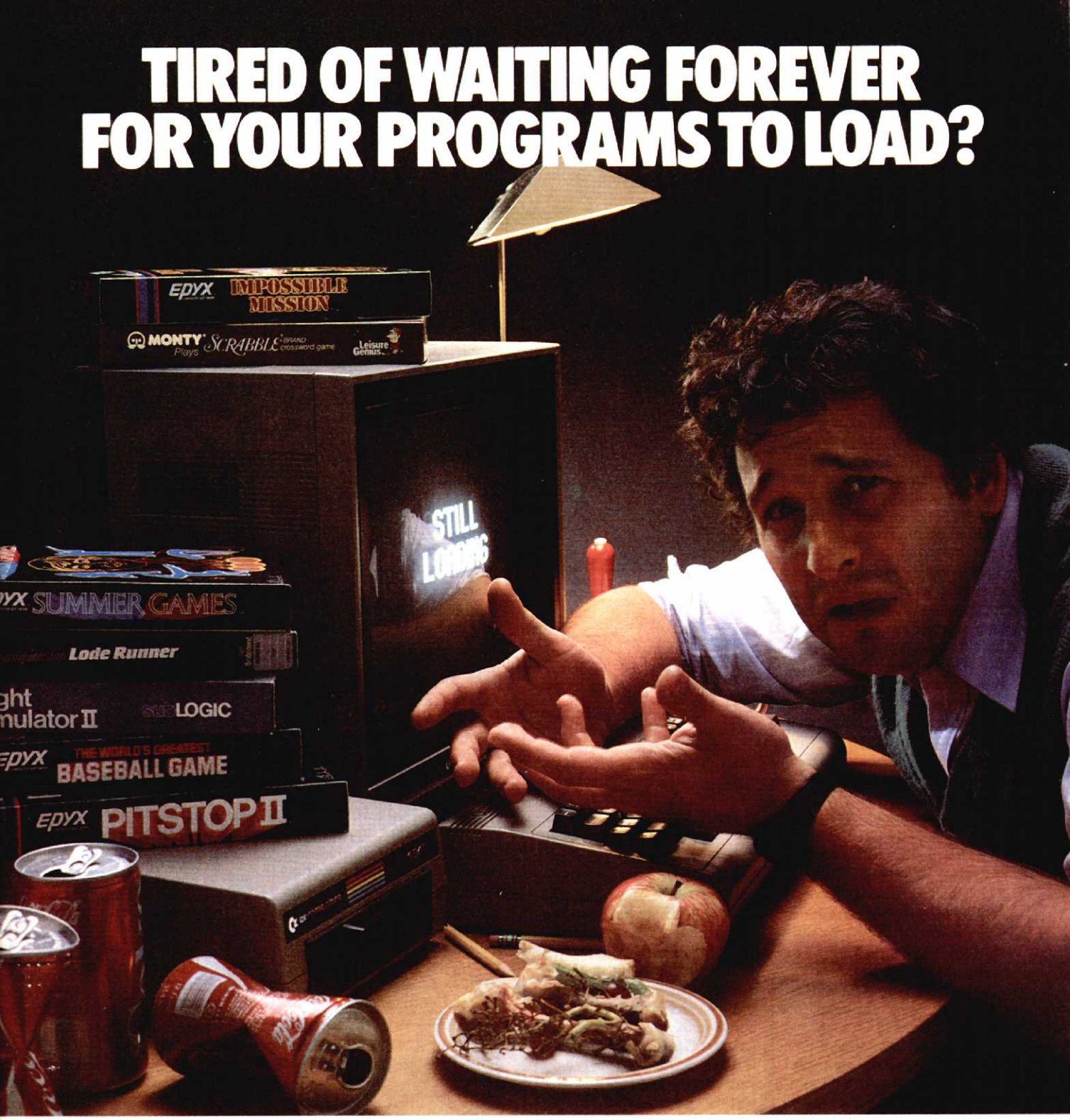
For months questions persisted about Coleco's commitment to Adam: Would Coleco be phasing it out? Would Coleco suddenly rally behind its home-computer system? Those questions were finally answered just days before the start of January's Consumer Electronics Show (CES), when Coleco announced that it was selling off all Adam inventory to an unnamed retailer. Citing unstable market conditions, significant financial losses, and the continued success of its Cabbage Patch line of toys, Coleco bowed out of the computer business. A company spokesman, however, says Coleco will continue to manufacture ColecoVision and develop and market software of both Adam and ColecoVision. Games such as **Spy Hunter**, **2010 Action**, **Jeopardy**, **Family Feud**, and **Dragon's Lair** have all recently been released. Also, Coleco has begun shipping a unique "Best of" series — **The Best of Broderbund** (**Choplifter** and **A.E.**) and **The Best of Electronic Arts** (**Pinball Construction Set** and **Hard Hat Mack**) — with two games on one data pack. Lastly, Coleco says it will be honoring the Honeywell service agreement and Adam scholarship program.

SOME VID KIDS HAVE ALL THE LUCK

Rawson "Tex" Stovall doesn't rip off **Pac-Man** machines, he just beats them and then tells the world about it. The self-proclaimed "Vid Kid" has been writing about video and computer games for the past three years, and now, at 12, he's decided to take a shot at TV stardom.

Starting in January, Stovall became a regular contributor to PBS's award-winning *New Tech Times* syndicated show. Stovall, who hails from Abilene, Tx., joins reviewers Danny Goodman, Tim Onosko, Fred D'Ignazio, and Stephen Banker, NTT's resident "technoklutz." The show is produced by WHA-TV in Madison, WI, and is hosted by Mort Crim.

TIRED OF WAITING FOREVER FOR YOUR PROGRAMS TO LOAD?



INTRODUCING THE FAST LOAD CARTRIDGE FROM EPYX.

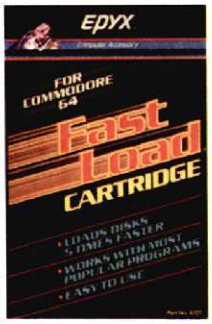
You're tired of waiting forever for your Commodore 64 programs to load. But it's no use glaring at your disk drive. Calling it names won't help, either. It was born slow – a lumbering hippo. You need the FAST LOAD CARTRIDGE from EPYX. FAST LOAD transforms your Commodore 64 disk drive from a lumbering hippo into a leaping gazelle. With FAST LOAD, programs that once took minutes to load are booted up in a matter of seconds.

FAST LOAD can load, save and copy your disks five times faster than normal. It plugs into the cartridge port of your Commodore 64 and goes to work automatically, loading your disks with ease. And that's only the beginning. You can copy a single file, copy the whole disk, send disk commands, and even list directories without erasing programs stored in memory.

And unlike other products, the FAST LOAD CARTRIDGE works with most programs, even copy protected ones, including the most popular computer games.

The FAST LOAD CARTRIDGE from Epyx. Easy to insert, easy to use and five times faster. So why waste time waiting for your disks to load?

Speed them up with FAST LOAD!



EPYX™

HOTLINE

MUSEUM PIECES

Most of us smugly assume that the Age of Electronics is barely underway — not likely to have left any historical artifacts or fossils around yet for collectors. A trip to Boston's Computer Museum is a good cure for that particular brand of hubris. You'll find computer relics from as long ago as 1950 here — and one from 1617. The first-ever interactive videogame is here, too. By interactive they mean that you can move a control and something will actually happen on the screen more or less immediately. It's called Space Wars and gameplay is almost unbearably slow by modern standards. It features two spaceships and a black hole in the center that warps the unwary out to the edge of the screen.

The museum has an excellent collection of everything from UNIVAC to the first minicomputer: DEC's PDP-8, which could be plugged into an ordinary outlet and was a bargain at under $10,000. The Computer Museum is located at Museum Wharf, 300 Congress Street, Boston, MA. Admission is $4.00 for adults and $2.00 for students and senior citizens.

DINNER MOST FOUL

The invitation read, "There's going to be a murder at the Hart Mansion. Infocom dares you to solve the crime!" The agenda included such specialties as Interrogation, Investigation and Intrigue. Guests were warned to be prompt, for "death waits for no man." As we arrived for Infocom's CES bash, gunshots echoed through the room; suddenly, everyone was suspect.

The coroner's report soon gave us the grisly details: one Jonathon Smith, a male Caucasian, had died of two .22 caliber gunshot wounds

to the chest. He had incurred a fractured skull, most probably from his fall. He was clutching a knife in his hand when found. Apparently, there were seven suspects, including Sydney Ferrari and Lauren Simmons, both of whom Smith met while vacationing in Acapulco; not surprisingly, he had had an affair with Simmons there, then dumped her when he returned to the States. Some might say Smith deserved to die for that alone. Had Simmons committed the commonest of all crimes — the crime of passion? All fingers pointed at her as she innocently pawed the broccoli quiche.

Several hours passed before Detective Peter Lyric delivered the verdict: all seven suspects were guilty! An ex-partner, Miles Archer, had poisoned Smith's banana daiquiri (knowing Smith was allergic to bananas, Archer colored the drink red); Simmons clobbered him over the head with an onyx Maltese falcon; Ingrid Asta, his personal fortune teller, fired the shots.

Lyric was the first to admit that he couldn't have solved the murder without the help of British sleuth Chris Horseman. He and eight others in attendance arrived at the same conclusion, but Horseman got there first. He'll vacation in Bermuda, courtesy of Infocom, sometime this month.

Smith is survived by a wife, two darling children, and a dog named Boot.

GETTING MAD

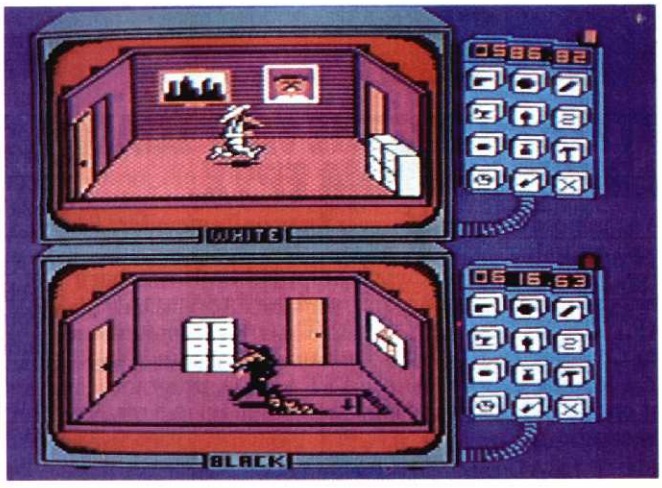
First Star's President Richard Spitalny had had it up to here with the bozos at *Mad Magazine*. Just because his company created a computer game version of everyone's favorite cartoon strip, "Spy vs. Spy," didn't mean freebies for everyone at *Mad*. So, he sat down and wrote a letter to *Mad*, partly to tell the magazine's readers ("all two dozen of them") about the game, but really to set matters straight between the two companies. Wrote Spitalny: "Would you please tell your 'usual gang of (cheap) idiots' to stop calling my office and bugging my secretary for free copies of the game. The answer is 'NO!' " End of discussion.

Meanwhile, First Star confides that a **Spy vs. Spy** sequel is being strongly considered. And **Boulder Dash**, an *EG* 1984 Arkie winner, has just

been released for the IBMs. Arcade players who've yet to play Exidy's version of *Boulder Dash* should check the local 7-11 and supermarket. For whatever reason, it isn't being distributed to many arcades.

ADAPSO BUSTS PIRATE

The Association of Data Processing Service Organizations (ADAPSO) declared war on software pirates when it filed a joint suit with MicroPro International against American Brands Inc., a Fortune 50



company, in January. The suit alleges that Wilson Jones Co., a unit of American Brands, has been making "unauthorized use" of MicroPro's word processing, spelling checker and address printing programs. They are asking for unspecified compensation.

Future Computing has estimated that half of all software application programs — such as word processing programs — have been pirated. With this in mind, ADAPSO proposed that an electronic lock-type device might be attached to computers; only a key could unlock the device and allow the program to run.

STEP ON IT

The mouse is back on the floor, where it belongs. At least, that's what Versatron, manufacturer of the Foot Mouse, this year's best-named product so far, will have you believe. "The Foot Mouse," says Versatron's president, Allan Voigt, "goes beyond what hand-mice, light pens, pads and other data-entry devices are presently capable of. Our tests showed substantial increase in work ease and productivity."

Though the Foot Mouse is targeted for office use, there's no reason why IBM PC owners can't purchase one for use at home. Shortly, Versatron will begin selling foot mice for Apples, the Macintosh, and Compaq as well. The price is $225.

COMPUTEREYES THE LIMIT

In the March *EG* we told you how **MacVision**, Koala's digital interface for the Macintosh, lets you display images taken by a video camera or from a VCR or TV on your Mac monitor.

Another company, Digital Vision, is offering a similar product, called **Computereyes**, for Apples and the Commodore 64. For $129, you can buy the interface module and software; for $349, Digital Vision tosses in an Ikegami video camera. In either case, *Computereyes* scans the image (black and white only) and reproduces it on the computer screen in about six seconds; for multi-level gray-scale images the time varies between 25 and 50 seconds.

Computereyes is compatible with the Koala Pad and drawing programs such as **Doodle**! and **Flex-Draw**. For more info, call: (617) 444-9040.

SURF'S UP

Had your fill of staring at computerized **Fishies**? Then sit back and relax and listen to the waves crash onto the shores of your C-64. This month's off-the-wall program is JAL's **The Surf**. You'll see a coastal scene with a constant roll of breakers heading your way; you'll hear the rhythmic sound of waves harmonizing through the speaker. The product description reads: "Great for blocking out undesired noise, talk, etc. around you . . . an aural room freshner or for inducing sleep. The screen goes blank for use in a dark room at the touch of a key." Beach towel and chaise lounge not included.

Write: JAL, Box 128, So. Milwaukee, Wis. 53172.

NEO-NAZI NETWORKS

At least ten bulletin boards catering to right-wing groups such as the KKK and Neo-Nazi party have been discovered by networkers lately. One Source member reported that a message informing others of the existence of six such networks was followed by a second message adding four more to the list. Each had a phone number where the board could be reached. (An admitted KKK member went on at length to explain why Aryan supremacy is the answer to all of man's problems.)

"This is incredible," said the Source member. "It's as if you were peacefully strolling through Disneyland and suddenly you came upon a cross burning. I guess behind the mask of a computer, you can do just about anything."

BACK TO BASICS

Sure, the big news in the arcades is Bally/Sente's licensed version of **Trivial Pursuit** (the Genus edition) and perhaps Data East's latest laservideo, **Cobra Command**, but have you seen all those old-fashioned shoot-'em-ups like Exidy's **Cheyenne** (the follow-up to **Crossbow**), Williams' **Turkey Shoot** (reviewed in last month's *EG*), and Zaccaria's **Shooting Gallery**? Back when the Beatles were still cutting hits, electromechanical gunfights like the above were the rave in the arcades. Pull the trigger and fire at metallic objects playing peek-a-boo inside the box. In the '70s, the arcades discovered video and joysticks and buttons. Apparently, with the proliferation of trivia games and rifle shoots, the arcade manufacturers have come full circle.

By ROE R. ADAMS III

the infinitely improbable DOUG ADAMS

If you ever wake up one morning and find yourself in a strange room with a splitting headache and no tea, where would you be? No, no, not there (but what a deliciously naughty thought). Rather, you'd be about to spend a wondrous sojourn inside the fertile mind of Douglas Adams, creator of **Hitchhiker's Guide to the Galaxy**.

The four books in the *Hitchhiker* Trilogy (that anomaly is consistent with known improbabilities) have generated such a devoted following worldwide that the books have obtained major cult status. While many unenlighted people still respond, "Who?" to a suggested viewing of a *Dr. Who* episode, the mention of *Hitchhiker's Guide to the Galaxy* elicits such comments as "Now, *that's* funny!"; "What a book!"; "Awesome"; "Isn't that the Carl Perkins show?"; "The movie was excellent"; "I hear that Douglas Adams is really Arthur Dent and that the book is an autobiography"; and even a whispered "I hear the guide is for real, honest." All of the above is true except for the part about the movie which wouldn't be released until the turn of the millennium, and that bit about Douglas being Arthur Dent. Anyone who knows Douglas Adams well, would know he was really Ford Prefect, the celestial vagabond on an expense account.

Douglas Adams began only slightly humorous. So, how does one learn to be really funny? Well, it pays to be born into an aristocracy noted for its unintentional humor. Then go to an exclusive private school that requires everyone to wear hilarious uniforms, and where they turn the worst students into lovely rocking chairs. Finally, one should attend a world-famous University that specializes in classic comical curriculums. No, it is not Harvard (good guess), or even Brown (which is much closer to the truth), but, is in fact, Cambridge. Ah, almost caught you there!

Hitch a Ride With Doug Adams, The Man With a Heart of Gold.

DOUG ADAMS

You were thinking, "But Harvard is in Cambridge." But this is the Cambridge that is in Cambridge, which is to say, a town in England (a.k.a. Great Britain, United Kingdom, Arthur's Place). The guidebooks refer to Cambridge as one of the country's great inland ports, though perhaps the word "port" was a typo for portal.

Another critical ingredient for becoming a successful comic writer is being born in 1952. That means that during the early '70's you'd be able to mix and match wits with such luminaries and great straight men as Dudley Moore, John Cleese, and Graham Chapman. Stir that all together and, while you do not get Hamlet written by 500 monkeys, you do get *Monty Python* (and friends). Douglas Adams qualified as an early friend and occasional collaborator on the hit television series. Asked about his continuing relationship with the Monty Python people, Adams says, "Terry Jones and I have been great friends for a long time. We often have lunch to discuss what we're going to do together and we always end up having a great lunch."

Adams shamelessly traded in on his numerous *Python*-generated contacts within the BBC (not an easy feat) for a job as one of the script editors for the mega-series *Dr. Who*. Adams even got to script a couple of the more vaguely unforgettable episodes. Following the good doctor through a few seasons of reincarnations and personality changes taxed even Adams' hardy constitution.

Wanting to get a way from it all, and relax in a quiet environment, Adams hired on as a bodyguard to an Arabian royal family. This low-key job only required him to stand outside a door, bow occasionally, and duck hand grenades. Seems Adams took this employment with his usual acute sense of timing—the height of the OPEC oil crisis and rabid anti-Arab sentiment. The only momento that Adams still has from those fun-filled days is his heavy-duty, official Chuck Norris black leather jacket. He is rarely seen in public without it, lending credence to the rumor that it is so bulky because it is Ninja proof.

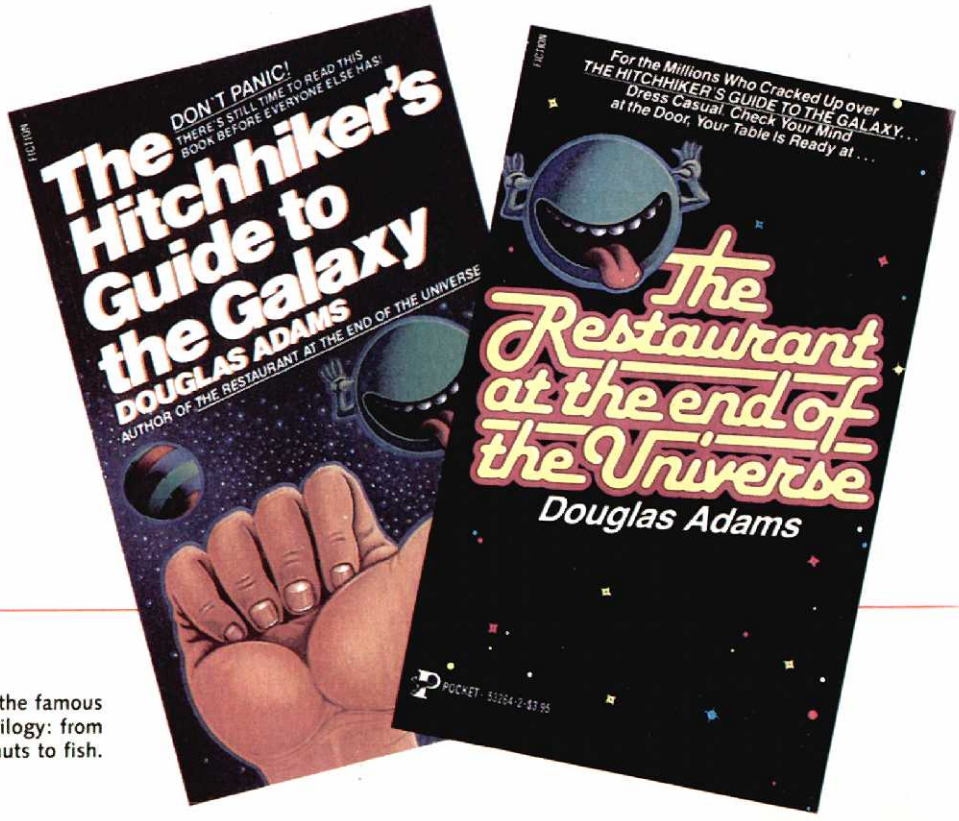
Leaving this job for the exciting, globe-trotting career as a world famous, wealthy author was easy. However, there were a few small in-between stages, like becoming wealthy, and becoming famous. The globe-trotting part was fun and actually led to the rest.

Traveling through Europe on a negative cash flow is not easy, but it can be done. Carrying his trusty, much worn, copy of "The Hitchhiker's Guide to Europe," Adams went where few natives dared to tread, even off-season. One night in a slightly drunken stupor, Adams found himself in Innsbruck, Austria, face up, looking at the starry sky (the entire fate of the unknown universe would have been changed if it had been cloudy that night). The thought randomly came to him: "Eureka! It floats!" This was closely followed by two arias from Bartok's atonal opera, *Bluebeard*. Then in thirty-foot high letters, tilted back and receding, came the thought *Hitchhiker's Guide to the Galaxy*. Why not, no one had done it before! It's a catchy title and think of all those galactic royalties if it goes into syndication.

Now the dilemma was what medium would maximize the audience? Since most of the readers were going to be Pan-Galacticans, the best way to reach them would obviously be through a radio telescope beamed across the universe and all adjacent slums. Flush with triumph at this brilliant marketing idea, Adams hurried to the BBC. Detoured en route by a six-year time warp (he had to write copy sometime), he arrived at the BBC just when they were fresh out of telescopes. So, in typical BBC practicality, they put the show on the radio and beamed it across the Thames to adjacent slums.

The rest is history. Every Pan-Galactican living in disguise in London listened to the show (1978 was the year of the supersaver El-Alien tours) and sent in tons of incomprehensible fan mail. Since the BBC reportedly never actually reads a show's mail but just weighs it, the program was declared a two-ton smash hit and renewed for a second year.

A book was written based on the shows, certainly an excellent ecological recycling of old scripts. This book was named


DON'T PANIC!
THERE'S STILL TIME TO READ THIS BOOK BEFORE EVERYONE ELSE HAS!
The Hitchhiker's Guide to the Galaxy
DOUGLAS ADAMS
AUTHOR OF THE RESTAURANT AT THE END OF THE UNIVERSE
For the Millions Who Cracked Up over THE HITCHHIKER'S GUIDE TO THE GALAXY...
Dress Casual. Check Your Mind at the Door. Your Table Is Ready at...
The Restaurant at the end of the Universe
Douglas Adams
POCKET

The four books of the famous *Hitchhiker's* trilogy: from nuts to fish.

"The game was more fun [than the books]. Writing a book is staring at a piece of paper until your forehead bleeds."

Hitchhiker's Guide to the Galaxy (might as well run with your proven winner), and promptly sold out. Little realizing that the first book had only been bought as a souvenir item by the departing Pan-Galacticans at the end of their tour, Adams wrote a second novel: *The Restaurant at the End of the Universe*. This book was appropriately placed in the culinary sections of the bookstores. Julia Child even did a television show on how to properly prepare a talking-steak dinner. Some dark rumors circulated afterward about the simultaneous disappearance of her arch rival, the Galloping Gourmet. People, however, rushed out to get the recipes from the first book, as the second book continued after the appetizers.

The BBC decided that if it was good enough for the French Chef, then it was good enough for British television. So, a BBC television mini-series was done on the books patterned after the maxi-series, *The Forsythe Saga*. Belatedly realizing that Adams Chronicles had already been usurped as a title, the BBC imaginatively called the series *Hitchhiker's Guide to the Galaxy*. In true economical BBC fashion, the television series was a condensed version of both books, thus saving the BBC from paying out for two shows.

Steve Meretzky, co-perpetrator with Douglas Adams of the electronic version of the *Hitchhiker's Guide.*

Now the initial book really started to hit some sales figures. It was also first reported being smuggled into the United States via a case of Snickers. The desperate smugglers were thus able to bypass the numerous federal agencies on guard for illegal British humor.

Alas, the government's worst fears were confirmed when the highly contagious *Hitchhiker* proceeded to sweep the ranks of science fiction readers in the United States. The condition reached epidemic proportions when British press copies of the third book, *Life, the Universe, and Everything*, flowed over the borders from Canada. Faced with the prospects of detoxifying thousands of rabid fans, the government capitulated and declared Douglas Adams a schedule-one uncontrollable British humorist.

Official U.S. versions of Adams' books now appeared everywhere to rave reviews. Numerous radio stations broadcast the old shows. Channel 2 in Boston, the

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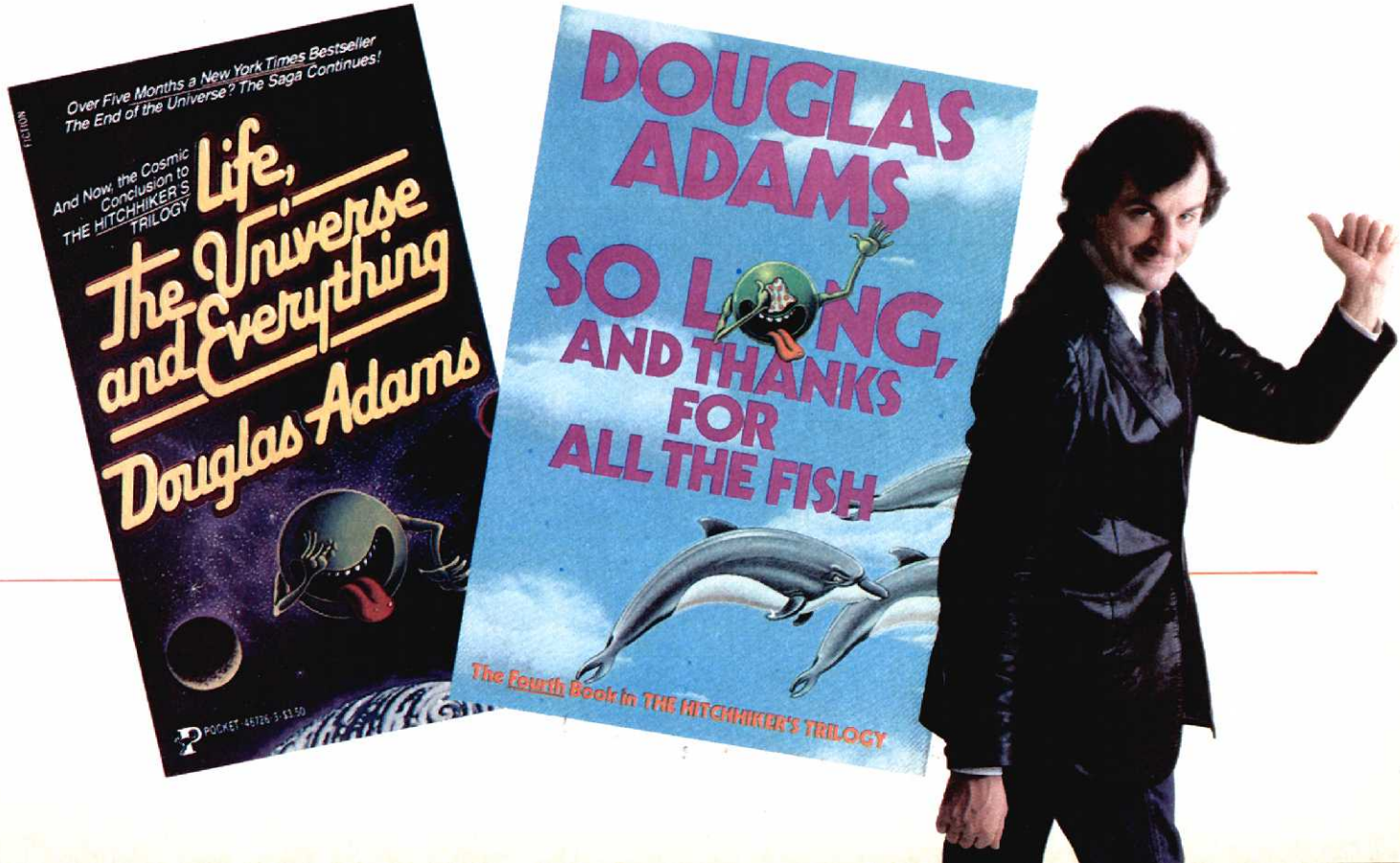
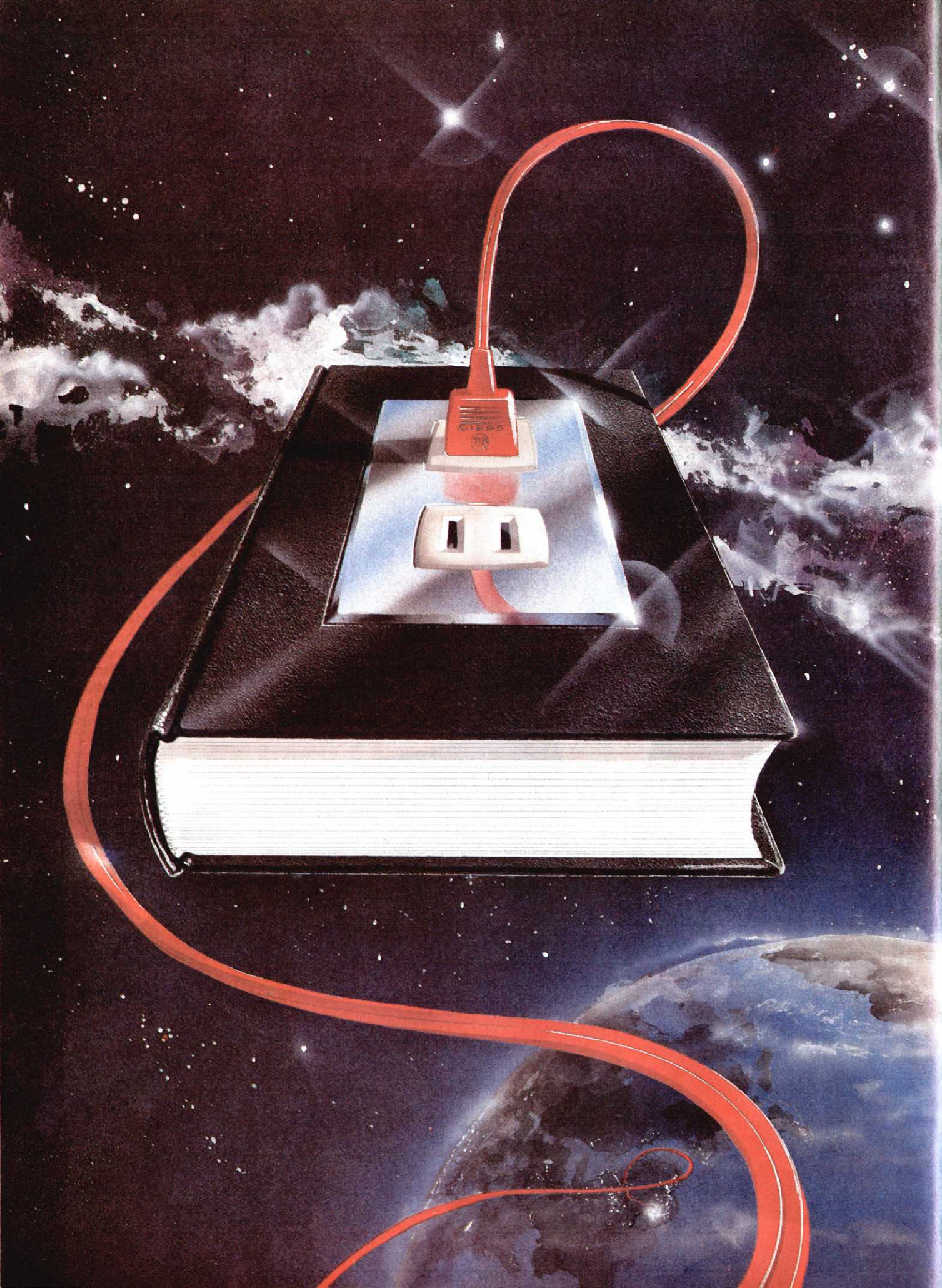

Over Five Months a New York Times Bestseller
The End of the Universe? The Saga Continues!
And Now, the Cosmic Conclusion to THE HITCHHIKER'S TRILOGY
Life, the Universe and Everything
Douglas Adams
FICTION
DOUGLAS ADAMS
SO LONG, AND THANKS FOR ALL THE FISH
The Fourth Book in THE HITCHHIKER'S TRILOGY



BOOTED UP ANY GOOD BOOKS LATELY?

By CHARLES ARDAI

Software Companies Take A Novel Approach to New Kinds of Entertainment

Until recently, interactive fiction seemed to be getting rather stagnant. After all, every company has already gone through the tried-and-true adventure game themes of medieval battles between wizards and dragons, hard-boiled detective stories, treasure seeking a la Indiana Jones in perilous old temples and ruins, and science-fictiony searches through futuristic, but deserted, planets, asteroids and spaceships many times over; things seemed to be getting rather repetitive. Once in a while a really original game would appear, but that was a rare occurence. There's no question that what we needed was an influx of new ideas.

Finding new ideas was harder than it sounds — even Infocom's **Planetfall** and **Enchanter** were — as far as their plots were concerned — basically rehashings of old, used concepts. It quickly became evident that companies would have to start looking outside the market for a souce of originality. And so, in a fit of inspiration, or perhaps desperation, several companies simultaneously cast their eyes upon their bookshelves.

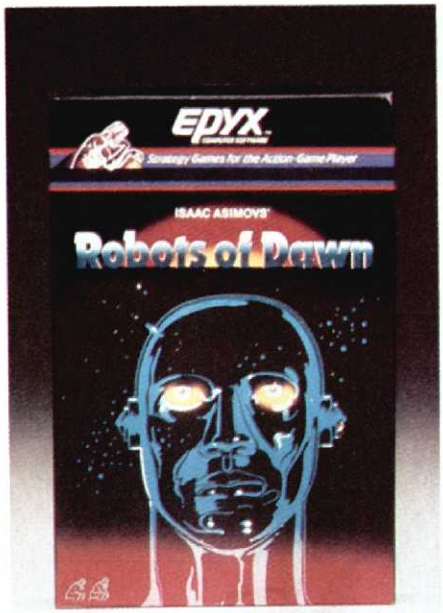
The decision to make adventure games out of books should not come as a surprise — players of *Dungeons & Dragons*-type role-playing games have been doing it for years. Books are wonderful as sources of imaginative escapist entertainment, but too often readers fall into the "I would have done it differently" syndrome. By their very nature, books make readers observers of, rather than participants in, any action that they depict. Only by converting a book to a more interactive format, like a role-playing game or a "Choose-Your-Own-Adventure" type book, can a reader truly take part in the events detailed within its covers.

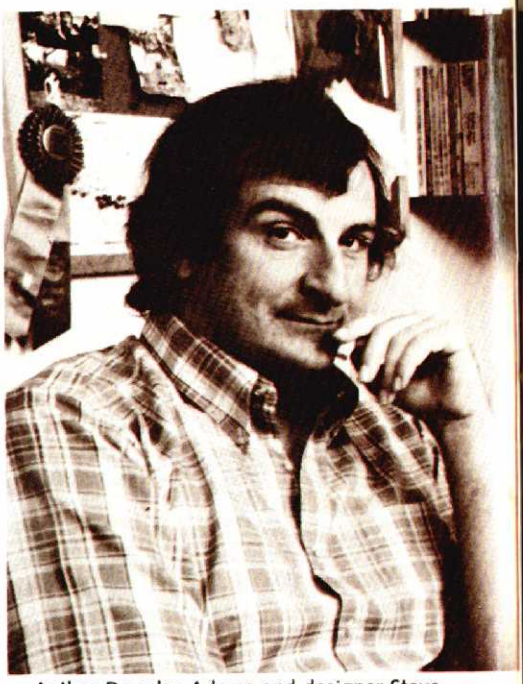
However, both formats have problems. Role-playing games almost always require two or more players. "Choose-Your-Own-Adventure" books are very limited, lacking both the element of human interaction and the overall complexity found in a full role-playing game. What's more, such "interactive books" are much too open to unintentional cheating.

Computer adventure games may not yet be able to duplicate human interaction, but the best of today's technology comes pretty close. Certainly, computers can easily mimic the complexity of a role-playing game, and they never allow a player to see the solution to a puzzle before he has found it for himself. The connection was made: What better way to boost the adventure game industry than to take ideas from the boundless imagination of books?

Obviously this train of thought, or one very similar, has been passing through the minds of a number of game designers and

BOOTED-UP BOOKS





Author Douglas Adams and designer Steve

industry executives, since over the past few months various types of book-based adventure games have been turning up on the market at a tremendous rate. Epyx was one of the first to enter the field with **Dragonriders of Pern**, a strategy adventure based on the bestselling sci-fi series by Anne McCaffrey, and **Robots of Dawn**, a futuristic whodunnit mystery game converted from the novel of the same title by Isaac Asimov. Forthcoming is a second Pern game called **Moreta: Dragonlady of Pern**, also being released by Epyx. Infocom recently released a **Hitchhiker's Guide to the Galaxy** adventure, based on the hilarious cult classic by Douglas Adams. Quicksilva's **The Snowman** has its roots in a novel by Raymond Briggs. And, of course, the entire Wyndham Classics and Telarium (nee Trillium) lines of adventure games are based on famous books or were written by well-known authors.

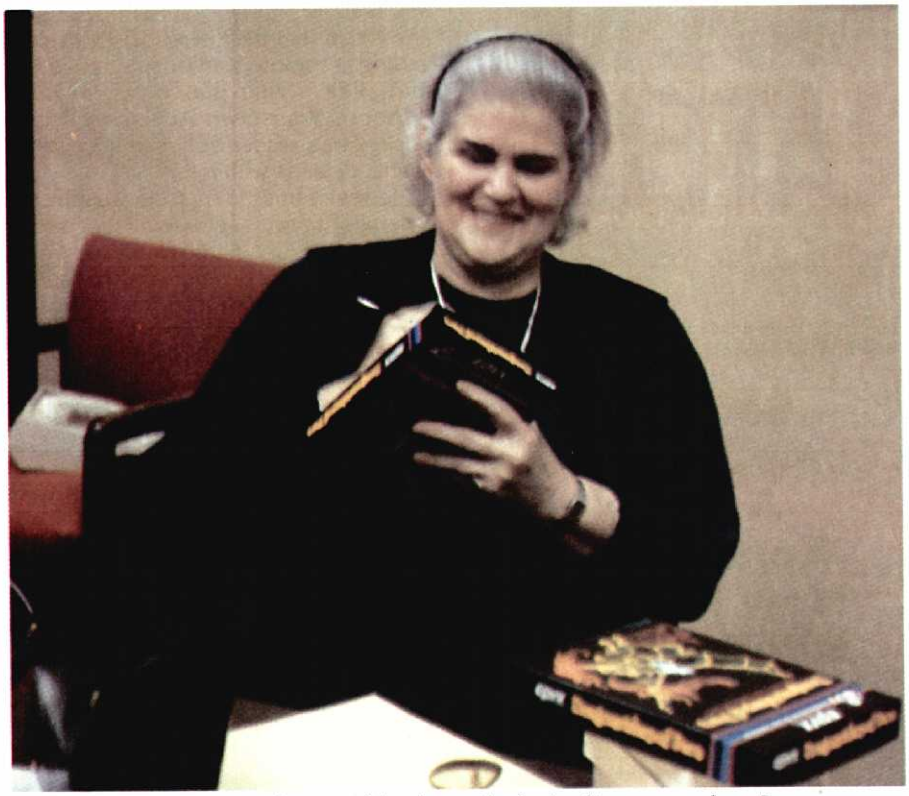
The Telarium games are unique in that they depend more heavily on input from the authors on whose books they are based than do the games made by most other companies. Seth Godin, Telarium's founder, explained the company's unusual practice of giving the writers an opportunity to play a major role in the creation of each new game. "These games are very much like movies and books because they are both visual and literary," he said. "We wanted to go to the people who could write that the best. And that's not programmers — it's authors."

Infocom followed a similar policy when Adams approached them with the idea of a *Hitchhiker's* game. They gave him a free hand in writing the general story and the various encounters, and had ex-science fiction author and designer of *Planetfall* Steven Meretsky write it into an adventure game format. The results of this unique collaboration can be seen throughout the game, which is filled with Adams' very distinct sense of humor. Not only does *Hitchhiker's* play well, but it reads well, too. As an experimental way to design an adventure game, *Hitchhiker's Guide to the Galaxy* is a success.

A different point of view is held over at Epyx, where talented game designers and programmers were the ones to create both Pern games and *Robots of Dawn* with little input by the authors whatsoever. According to Robert Votch, a representative of Epyx, Anne McCaffrey did meet with the programmers to discuss and offer suggestion for both Pern games, the second more so than the first. In addition, she approved the final versions of both games. Still, most of the actual design work and programming was done without McCaffrey's presence.

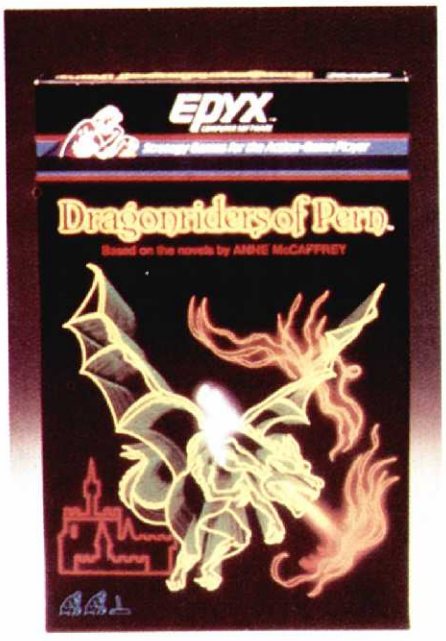
However, compared with the amount of input that Isaac Asimov had in the *Robots of Dawn* game, Ms. McCaffrey's might as well have written both Pern games singlehandedly. Mr. Votch reported that although the licensing agreement was made through his publisher, Dr. Asimov did participate in the design of the game through a set of guidelines that he sent in to Epyx. Dr. Asimov contends that he hardly even knew of the game's existence until a copy of the finished product found its way to his home — a copy he couldn't even try out since his computer, which he uses for word processing, is a TRS-80.

Would Asimov be interested in actually writing a game some time in the future? "Not really," he says. "If it were earlier in my writing career, maybe. But as it is, I'm too busy with my writing to start any other projects." (At a rate of about one book



Anne McCaffrey, whose sci-fi books are the basis of two games from Epyx.

Meretzky of the infamous *Hitchhiker's Guide.*



Byron Preiss with Telarium's *Dragonworld.*

every three weeks, Dr. Asimov is one of the nation's most prolific authors.) And his opinion of computer games in general? "We are faced with a new technology, and as always, we must accept the products of that technology."

New technology did indeed play a major role in the creation of these new book-games. Only a few years ago, an adventure was considered complex if it contained more than a dozen rooms. Now, recent leaps in technology have made possible complex adventures with over a hundred rooms, like Telarium's **Rendezvous with Rama**, a suspenseful game which takes place in a gigantic space complex. Telarium's other games are relatively massive, too; Ray Bradbury's **Fahrenheit 451**, a sequel to the acclaimed, world famous novel, is set in a futuristic New York City with a total of seventy key locations to wander through, and the more traditional **Dragonworld** whose medieval city of Kandesh includes sixty accessible areas.

Similar technical advances have made animated graphic sequences and background music not only a reality, but a standard feature of many adventure games. The Telarium and Wyndham games, for instance, all boast outstanding graphics and wonderfully atmospheric music.

Byron Preiss, head of Byron Preiss Video Productions, worked on the production of a number of Telarium games including Robert Heinlein's **Starman Jones**, Bradbury's *Fahrenheit 451*, *Rendezvous with Rama*, for which author Arthur C. Clarke wrote a brand-new surprise ending, and *Dragonworld* which he co-authored as a novel with Michael Reaves. In discussing the games, he explained why it is so much more difficult for an author to write an adventure game than it is to write a novel.

"[When writing an adventure] you have to anticipate a heck of a lot more, to understand the consequences of the characters' actions in more than one way. When you do a book, you can just say, 'Okay, this is how it is going to happen, and that's it'. When you do a game, you have to realize that someone can do many different things in any given situation. You have to preguess the players so that the events you put in seem logical."

On the flip side of these problems, celebrated writer Alan Dean Foster, author of countless movie novelizations and the popular *Spellsinger* series (the fourth volume of which, *Perturbations of the Perambulator*, is being released soon), was faced with some rather unusual difficulties in writing a novelization of the Telarium game **Shadowkeep**. The game is a hybrid of **Wizardry**-style action and a typical adventure game scenario, which involves saving a mythical world from destruction at the hands of a menagerie of evil,

Continued on page 74

Arthur C. Clarke, Byron Preiss and D. Harris.

THERE'S A MODEM TO THE MADNESS

By MARSHAL M. ROSENTHAL

Telegaming has come a long way since 1979 when DecWars was the only game on-line. Now, computer networks are serving up long-distance flights of fantasy that will make your phone bill soar.

The ultimate metaphor for life and death is in a laboratory in Livermore, Calif. Freud and Jung, had they been alive today, would be quite impressed if they spent a few minutes with all those military types (you know, the guys with the rainbows of patches over their left breast pockets) doing things like "role-playing" and "acting out." The fantasy at the U.S. Army's War College in Carlisle, Pa. is much the same. There, the brass is charting the Great Herman Kahn Imponderable, that Faustian deal we cut when we chopped up the atom. War Games for real, or was it just the movie?

Okay, here's what we're getting at: Just about everyone saw the charming little flick where Matthew Broderick uses his skimpy Altair to break into the Pentagon's mainframe and decides to delve into a scenario affectionately named, "Global Thermonuclear War." The square jaws of the Pentagon play these games for real — the simulations, that is. A simulation called the JANUS project has created the most realistic situations short of World War III, and it's played by up to eight players at the Livermore Combat Simulation Laboratory. They use terms like "mutual assured destruction" and "first strike," and basically take apart farmland and brick and mortar faster than Darth's light sword can nick Luke's arm.

The question is, naturally, how do we get to play, too? Why should the military have all the fun? Well, the Army's gizmo is a super-affair. It would take roughly the equivalent of 2,000 Apple IIs running at 32 times the normal speed to get anywhere near the graphics resolution and the unbelievable attention to detail the military has. Obviously, there's nothing that spectacular you can do with a micro alone. But add a modem and now you're talking about having access to data base networks like The Source and CompuServe, about playing war games with other people all over the world.

This fad was first known as interactive gaming, but is now just called telegaming, and it traces its lineage to 1979, when CompuServe first brought out the infamous space opera, **DecWars**. This game appealed to those who were bored with getting checkmated by **Sargon II**, and it soon attracted a following of some 700 rabid fans. (*DecWars* evolved, of course, and it became **MegaWars**, and then there were versions II and III of that.) Today, telegaming may not be widespread in terms of numbers, but among the faithful are devotees who don't think twice about their $5,000 a year networking charges. Let's face it, there are habits that cost quite a bit more, and telegaming has the virtue of being legal.

Now in its sixth year, telegames look far more sophisticated than the primitive sketches found in *DecWars*, and they span more ground than your typical galactic gunsmokes. There are very calm, introverted computer nuts who crave bridge and backgammon and poker in the wee hours, and can only get a game with other insomniacs of like interests who are logged on in a far corner of the planet. Even interactive bingo is available if your local church runs out of cards. Then, there is a phenomenon known as a "collaborative soap opera," which ran for several months on the Electronic Information and Ex-

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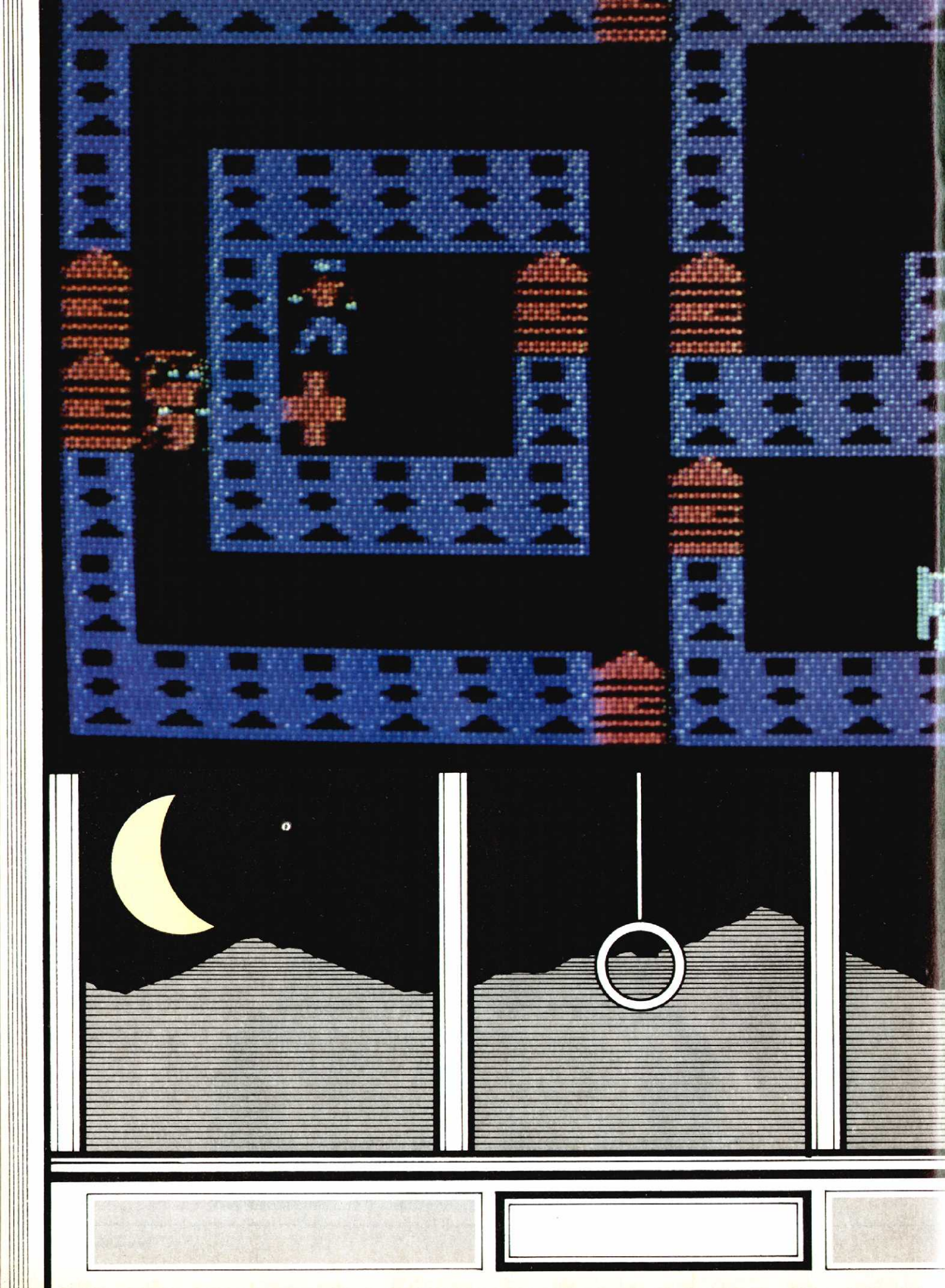
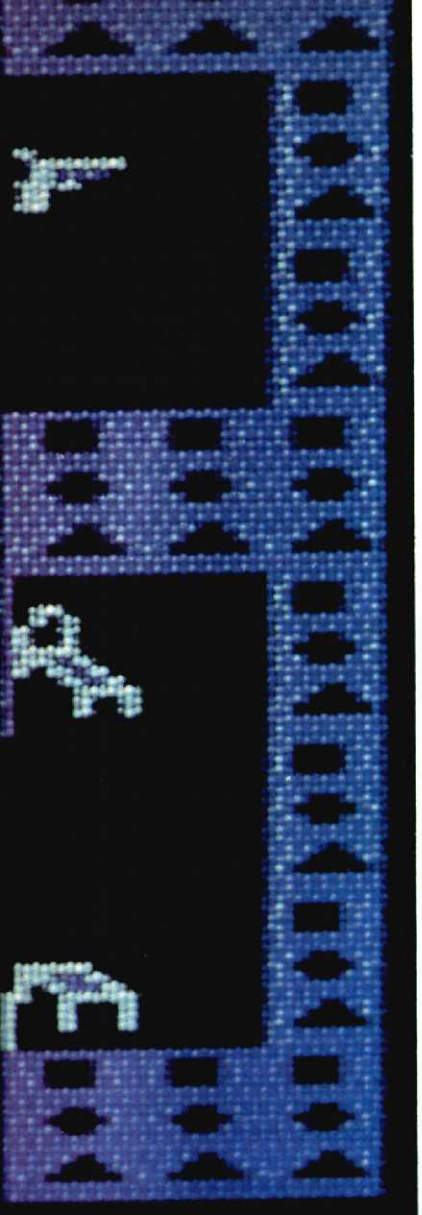
YOU ARE IN THE
LIBRARY. THERE
IS A BODY HERE.
YOUR JOB...
FIND THE KILLER.





SPECIAL SOFTWARE REPORT

AFTER 6 DAYS YOU'RE ALLOWED A NAP

With Electronic Arts' New Program, You Can Build Rome in a Day; the Rest of the Empire May Take a Little Longer.

By LOUISE KOHL

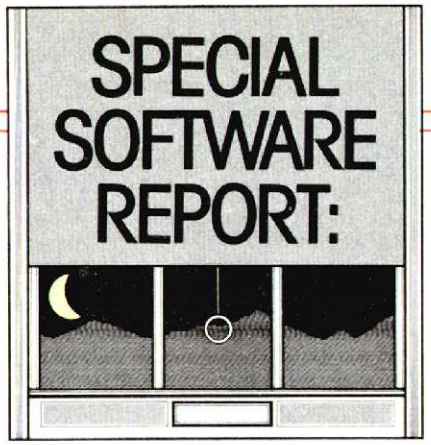
The greatest compliment I can possibly give **Adventure Construction Set** from Electronic Arts is, it takes 20 minutes to load any one of the program's three sections, and it's worth every disk-flipping second.

The Set is actually three different and complete programs, rather than three parts of a single program. It includes a tutorial section, **Land of Aventuria**, with six good to excellent "mini-adventures" to practice on; a challenging, full-length Stuart Smith adventure called **Rivers of Light**; and the construction set itself. Any one of these could have been successfully marketed on its own. Taken altogether, this is one of the most opulent and inexhaustible entertainment programs available today. And for a program as complex as this one is, with a little practice it's surprisingly easy to sue.

ACS is entirely menu-driven, using a joystick, and each of the sections requires a blank disk which the program formats. It's this program formatting that takes up the 20-minute load time. The menus have at least one quirk that I couldn't find clearly described either on-screen or in the manual. If you choose, let's say, to format your blank disk for *Aventuria*, the computer prompts you through a series of disk changes and then returns you to the original menu. The first time I did this, I confidently moved the cursor to "Play an Adventure." What this did was put the program right back into formatting mode. As far as I can tell, the only thing to do when this happens is to re-boot. The correct move is to exit the menu altogether; this leads to another menu which takes you to the fun part of the exercise. Once you've formatted the disk, returning to that adventure is a much speedier process.

There's so much to *Adventure Construction Set* that it's difficult to decide where to start. Assuming it's always best to start with the basics, let's look at Aventuria. This part of the program has a "How to Play"

Photos © Algis Norvila, 1985



section to familiarize you with the aspects of gameplay: choosing a character, moving around, picking things up, pulverizing bad guys, etc. Scattered throughout all the adventures in *Aventuria* are large red H's and crosses. Moving your character into the former brings up a text screen with hints and information. Moving into the latter makes your character healthier — you have to get the wealthy and wise part on your own. The manual includes a map showing the locations of the doors leading into each of the mini-adventures. This may all seem so baby-simple — especially to hardened campaigners — that it sounds boring. I assure you, it's not. The *Alice in Wonderland* area may not offer much of a challenge, but try *Save the Galaxy!* It may not be **Wizardry**, but it will give you a decent run for your money.

After cutting a swathe through all these short adventures, you can begin to practice the editing functions in this section as well. You can change not only the adventures you construct yourself, but any other adventure on the disk. Part of the editing function gives you an overview of all the rooms in a particular area of the game, each of which you can examine individually to find out what's in them in the way of friend, foe or furniture. If you like, you can then change everything around. You can even invent, draw, name, and arm a custom character of your own and drop it into any of the adventures. We drew a boxy guy with a hat, called him a "Doofus," and armed him with a frying pan, a deadly gaze and thick skin. Then we dropped him in the barracks of the *Save the Galaxy!* region. In playing the game later on, we finally made it into the barracks ourselves and there he was waiting for us. Unfortunately, once we entered the room he became free to wander about at will and hasn't been seen since. Not to worry; he's also a permanent fixture on the Master List of creatures. He can be picked up at any time and transported into any game or region.

Up to four people can play an adventure at the same time, using any assortment of characters. The characters take turns in moving around, and if there are any computer-controlled mobile characters around, they take their place in the line-up, too. This can get a bit tedious, if you're playing by yourself and are out-numbered by computer characters. I got stuck in a forest for much too long while two trolls had an argument and a bear wandered aimlessly from tree to tree. There are some stationary characters around, too. Snuggling up to them usually results in a conversation via text screen.

A character's power and life force are shown by vertical bars in the bottom right-hand corner of the screen. A green bar on the other side indicates the character's motility. The length of a turn is determined by the time it takes the green bar to disappear; this in turn is determined by the speed level of the character.

At any time in a turn, pushing the fire button will bring up an options list across the bottom of the screen. This includes using or dropping things, getting a new weapon, saving the game, adding a new character or retiring an old one. It also allows you to bring up the character's profile, a chart of his attribute levels, skills, and possessions. How fast you move, how much you can carry and who survives a confrontation (among many other things) are determined by very complex and mathematical interrelationships among the character traits. So complex, in fact, that it takes a computer to keep up with it all. Be glad you have one.

As in any adventure game, dying is one of the easiest things to do. Luckily, resurrecting yourself is just about as easy. Whenever a character enters a new region of a game, the game is automatically and inobtrusively saved at that point. When you choose to resurrect a character, he will be returned to the point of the last save. If you happen to get a wimp who can't even lift a sword, at least try to see to it that he has good dodging skills. He who turns and runs away and all that.

After sharpening your wits and honing your fighting skills in the tutorial section, move on to *Rivers of Light*. This adventure takes place in ancient Egypt and the manual assures us that a great deal of research went into its preparation. Given Suart Smith's earlier games such as **Return of Heracles**, and the scholarly bibliography included in the manual, this is easy to believe. On the other hand, the first two opponents I ran into were a troll with a large bone right out of Grimm's fairy tales and a bouncing blue bear. Not exactly Antony and Cleopatra.

Rivers of Light starts out in the Fertile Crescent, which I'm sure we all remember from grammar school. If you can remember the map from your history book or have an atlas handy, you're in luck. The game map is geographically accurate and it helps to be able to locate Egypt — not to mention tell the difference between the Tigris and Euphrates rivers. A word of warning about these rivers: they're no doubt a boon to local farmers, but they're impassible to interlopers. Unless you can develop some sharp swimming skills fairly quickly you'll be restricted to a very small area of the game and chased around by proliferating trolls and bears. As the goal of the game is eternal life, this is not an auspicious start.

The *ACS* manual suggests that you solve *Rivers of Light* before availing yourself of

A close-up of the Doofus: mini, maxi, and multiple.

the editing option. This is good advice — as where's the fun in an adventure game if you already know where everything is? However, using the editing function afterwards is also a good idea; it allows you to take the entire game apart and see how a master designer put it together in the first place. This is a good primer for constructing your own game; *Rivers of Light* was constructed using only the ACS program itself.

When you're ready to construct your own adventure, you'll have the option of incorporating any of 250 different locations, 500 creatures and more than 5,000 things, including buildings, weapons, magical what-nots, and, believe it or not, music. One of the more impressive details of ACS is the music. The title page score itself is worth the price of admission, but there's more. Each one of the adventure genres (sci-fi, fantasy and spy/mystery) has its own theme music, which you can include in your adventure at any point you like, choosing among long-playing motifs, short sections and sound effects. However, the first and easiest thing to do at this point is to give your adventure a name. We went for *Dragon's Bane* and decided to try to copy the map from Tolkien's *The Hobbit*.

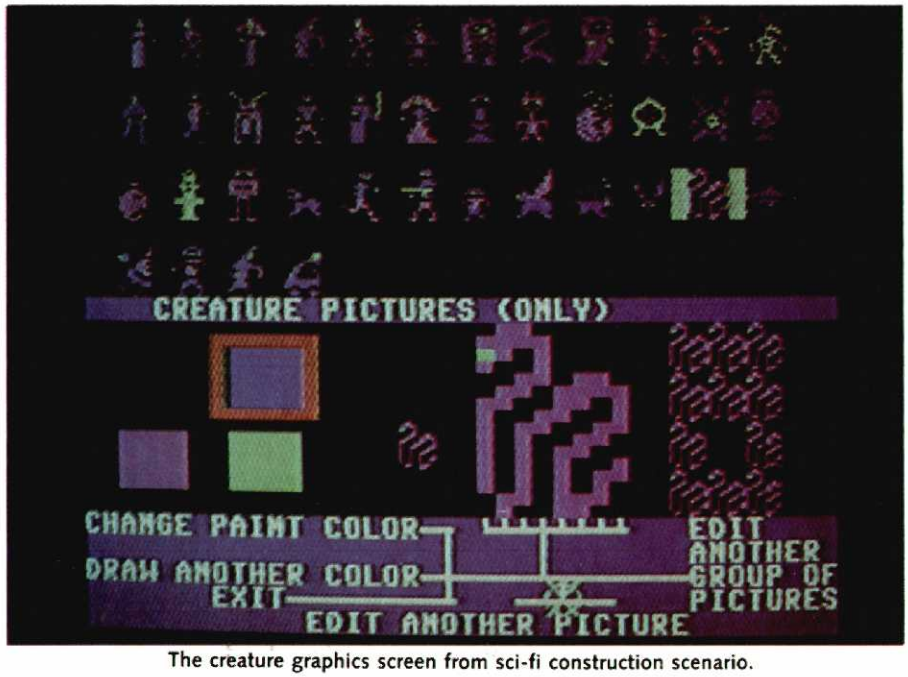
The world map of any adventure is much bigger than your monitor screen, so all the maps scroll as you cover the territory. When you're ready to build your own world map, an overview appears in the upper right-hand corner of the screen to show you what part of the total map area you're in. Now comes the creative part: deciding where to put the mountains, rivers, forests, doorways into sub-regions and towns. If there is some sort of building or other icon you need in your world-picture that is not on the master list, you can either draw what you need, or modify an existing picture. When you go into the Edit Graphics mode, you see the master set of icons in a particular category at the top of the screen. Using the cursor, you can pick one of these out and it will be shown at the bottom in its original size, magnified and in a pack. Any modifications you make on the magnification show up simultaneously on the other displays. There were no nice round Hobbit houses in the master list, but there *was* a round church with a cross on the roof. We removed the cross, rounded out the door, named it "Hobbit house" and re-introduced it into the list. All this was done with menu and joystick, and took hardly any time at all. When we returned to the world map, we were able to at least approximate Hobbiton. By 3 A.M., we had gotten as far as the Brandywine River and were searching the master list of creatures for something that looked like Tom Bombadil. I figure it will take us longer to get to the Desolation of Smaug than it took Bilbo and Co. originally.

As you can see, this program is a long-term commitment — you could spend years devising one-way doors and fiendish traps and puzzles. If you run out of ideas before the adventure is finished — or you have to get a job or something — you have the option of letting the program take over and finish it for you. Or if you have a chronic case of writer's block, the computer can build you a whole adventure from scratch or scramble an existing adventure. If you're sick and tired of always getting stuck halfway through an adventure program, make yourself one populated only with benevolent creatures and balmy weather.

Medieval philosophers spent a lot of time trying to decide if an omnipotent being could make a rock so heavy he couldn't lift it. The returns are still out on that one, but the *Adventure Construction Set* you *can* make an adventure so difficult that you can't solve it yourself. In fact, there's just about nothing you can't do with this program, and you can do it over and over again.

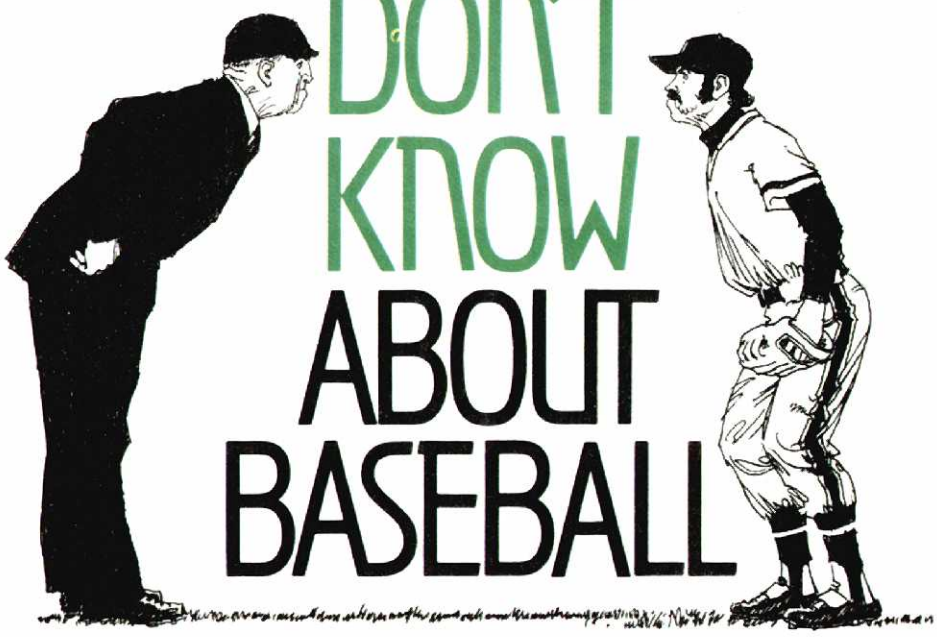
CAESAR
SUMERIAN TEMPLE
MOVE USE OBJECT NEW WEAPON ADD SOMEONE
REST DROP OBJECT NEW ARMOR RETIRE
FIRE USE POWER PROFILE SAVE GAME

"Caesar" makes it to the innermost Sumerian altar in *Rivers of Light*.



The creature graphics screen from sci-fi construction scenario.

WHAT COMPUTERS DON'T KNOW ABOUT BASEBALL



Micros in the Dugouts Are Fashionable These Days, But Do They Really Give Managers the Edge?

By DOUG GARR

Computers don't know bupkus about the summer game. Consider the following: The Orioles were gearing up for a three-game series with the Oakland A's last season. The A's computer said its pitcher had fared better against left-handed hitters than righties, a noteworthy characteristic because it defied common baseball logic. Righties were hitting him at .304 while lefties only .200.

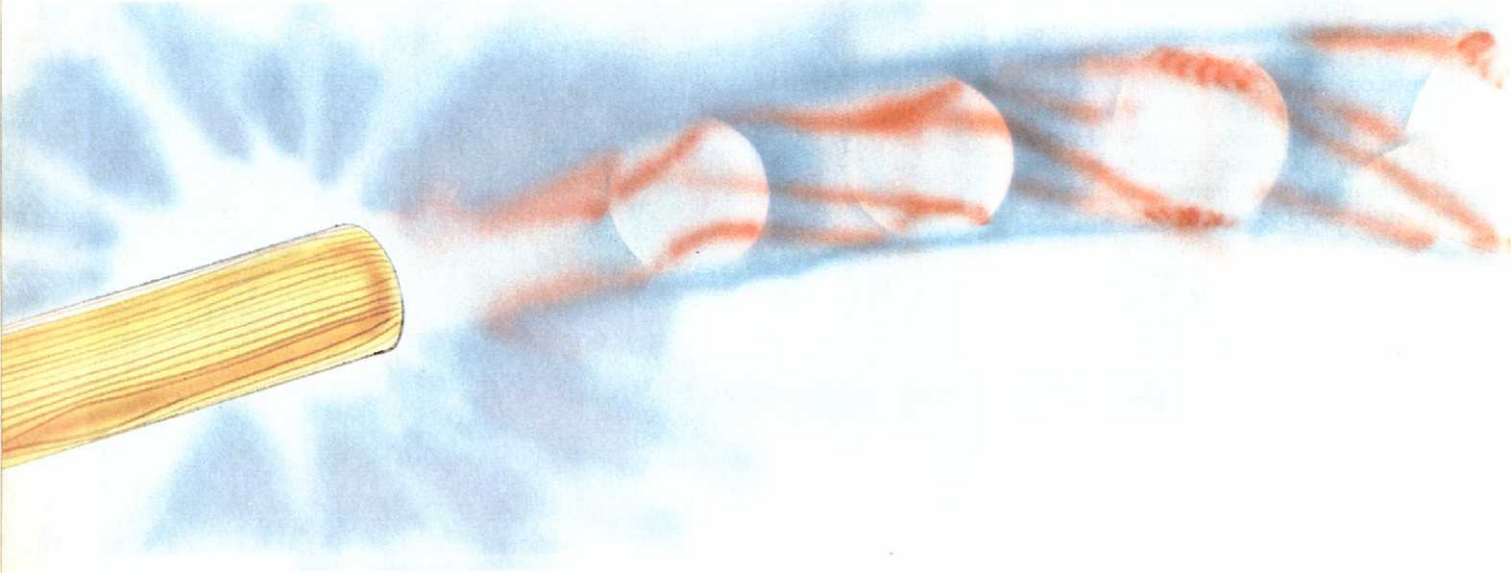
Baltimore's manager, Joe Altobelli, knows absolutely zilch about computers. So, naturally, going with common logic, he loaded his lineup with left-handed hitters.

The Orioles' lefty platoon of Singleton, Dwyer, and Lowenstein rocked Oakland for four runs in the very first inning.

Post mortem: The A's manager, Steve Boros, didn't even make it to the trade deadline this season. He was canned because he wasn't tough enough on his players. The computer was booted, too.

The Oakland A's have used a computer for the last three seasons, and so far it hasn't helped produce a pennant contender. Yet it appears that digital baseball is a reality, even with these dubious results. Computer ball has received all kinds of rave reviews. Sportswriters everywhere have been dazzled by its vast statistical reservoir and instant recall. But nobody claims he relies on them or forsees the day when he's going to call on one to check the odds on a squeeze play.

The White Sox have a computer, as do the Atlanta Braves, Toronto Blue Jays and the notorious Bronx Bombers. The Yankees' computer man faithfully records every slider, fastball, and foul tip, though hired-again, fired-again manager Billy Martin couldn't have cared less. There was no room for computers in Billy Ball. Martin never asked to see a printout while running the Yankees (or the A's, for that matter). He refused to take advice from a machine,



insisting everything he needed to know was already in his head.

Even with Yogi Berra managing, the Yankees hate the computer. The data entry man there is Doug Melvin, a former minor league pitcher whose fastball never had enough zip to make it in the majors. When not playing computer operator, he pitches batting practice. He didn't even want to be seen talking with a reporter about computers. Melvin explained that the team has three or four free agents who earn more per year than the entire Minnesota Twins. Big, big egos. Nobody making a million-two a year wants to ride the bench because a computer says so. "Baseball is very traditional, and it's tough for the players to accept something like this," Melvin says, nodding toward the Apple II monitor. "A lot of people think it can do anything. The other day we got rained out in Baltimore, and Scooter [Phil Rizzuto] came in and said, 'Hey, can that thing get the weather?' "

When he managed the A's, Steve Boros didn't hesitate to say his players pretty much despised the damn thing. Rickey Henderson, the dean of base-stealers, was one. "I think we're going at it too hard," he said. "We're losing, and it don't seem to be helping us right now. The computer can't tell you how you're gonna feel the next day, can it? If it could, we'd all be robots." Center fielder Dwayne Murphy openly dislikes it. Carney Lansford politely ignores it. Catcher Mike Heath insisted that he already knew all the hitters; the computer couldn't help him call a game. "Sports are too unpredictable," he said flatly. "That's never going to change."

The Oakland A's computer used to go on the road, and its operator carefully entered every pitch and every hit, walk, out, wild pitch, passed ball, sacrifice, and stolen base (known electronically as "events"). Before each game, Steve Boros would study the printouts. Mostly, he used the information to help him decide who to rest and when, who was a statistically eligible pinch hitter, or when to yank a pitcher (computers are apparently good at telling managers that so-and-so is only good for 90 or 95 pitches per game).

The most popular baseball program is named the **Edge 1.000**, and it can do everything but spit tobacco juice. The *Edge* was developed by Dick Cramer, a Philadelphia pharmaceutical designer by day and nighttime baseball fanatic. Cramer wrote it in the middle of the 1981 season, during the infamous baseball player's strike. His lone client at the time was Oakland, and the A's originally wanted the stats for the broadcast booth. Bill King, the voice of the A's, is now regularly supplied with all kinds of baseball-buff statistics. How some players couldn't pitch on Astroturf and some hitters couldn't hit at night. You may know that Rickey Henderson stole a record 130 bases in one season, but King points out that Rickey was nailed 42 times. During TV games, King entertains his audience during between-pitch lulls with all kinds of esoterica, occasionally flashing computer graphs on viewers' TV screens.

Chances are that the *Edge 1.000* will be outdated by the system ordered by the Atlanta Braves. It's a computer program developed by two consummate baseball purists, Steve Mann and Pete Palmer. Palmer has designed government radar systems, and Mann, 37, has a Ph.D in philosophy. The program will do everything but walk to the mound and pitch. The hit graphics will cover 140 sectors on the diamond and accommodate 13 different batted ball trajectories; everything from a "swinging bunt" to a "long high fly ball" to three different speeds of ground balls. Even the height as well as the distance of home runs will be added. The capper will be a "dual-location pitch" chart. Yes, Palmer expects to chart what happens to a pitch before it gets to the plate and then when it arrives, the results of which will show how much stuff a pitcher has.

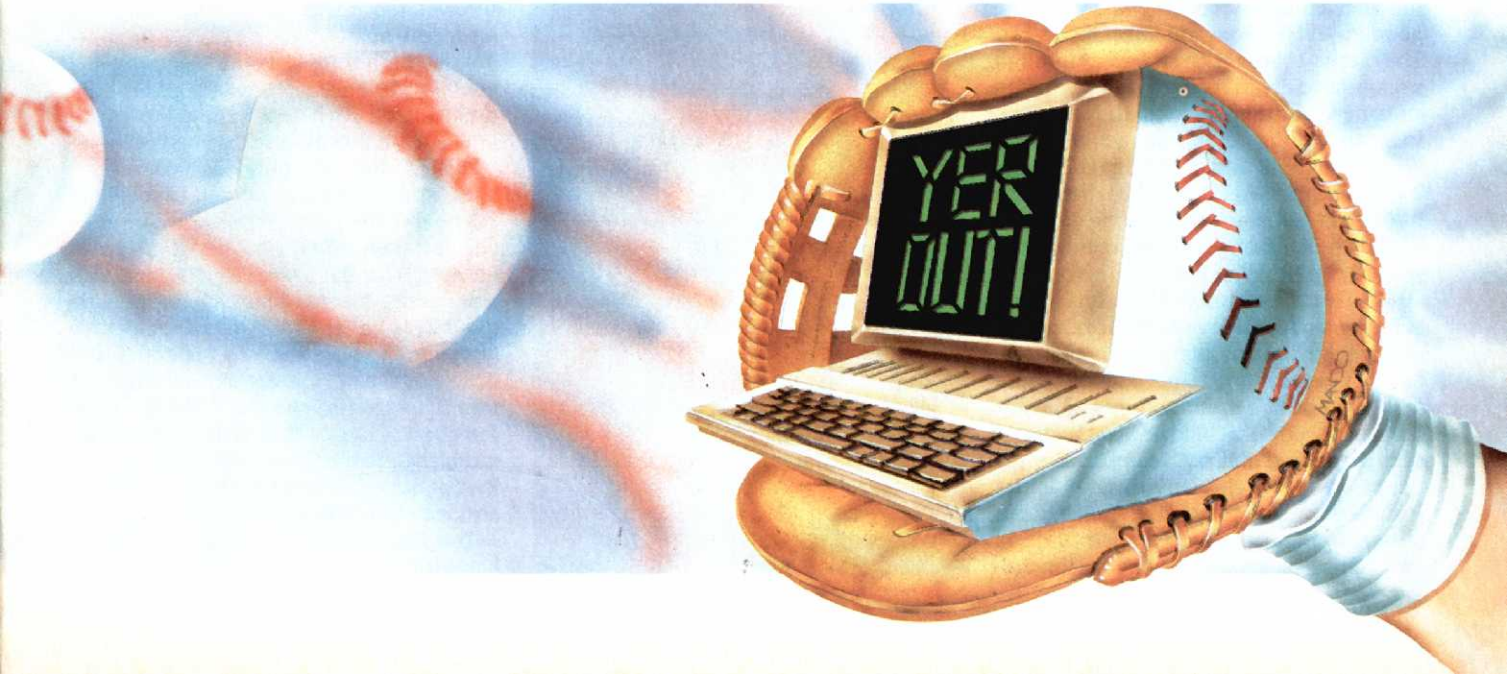
Yet even Steve Mann admits that computer baseball has been hyped too much. "The problem is that the data bases are too small," he complained. "Even [former Oriole manager] Earl Weaver didn't have enough information to make sound predictions." You need several hundred at bats and hundreds of thousands of pitches. Predicting what Pete Rose will do is easier for a computer than wondering what a rookie will do. But we already know that.

The computer may well raise the psych factor in baseball to new levels. Early in the 1983 season, the A's Steve Boros had given a pep talk to then-relief pitcher Steve McCatty. He had told him he was "definitely my short man," his stopper. A few days later, the A's are in Detroit, leading the game, one out in the ninth inning, men on base. Boros puts McCatty on the mound to finish up. Up to the plate steps the Tigers' Chet Lemon. Boros recalled from the printout that Lemon hits McCatty .462 lifetime. We have a critical situation brewing, thinks Boros. The Apple II is telling him to get the hook; chances are good that Lemon is going to cream one. "Well, I had just told Steve McCatty that he was going to be my short man," recalls Boros. "Now, do I jerk him off the mound when I've indicated to him that he's the guy I want at the end of the game?"

So, what happened?

"I left him out there. I figured it was better to blow the game than ruin his confidence. It was a case of good strategy being bad psychology." Boros grinned. "Lemon lined into a double play to end the game."

Perhaps Boros would still have his job if he went by his instincts a little more. G



Helmet on, battery pack in place, the Photon warrior is ready for battle.

HOW TO VAPORIZE FRIENDS AND INFLUENCE PEOPLE

By MARSHAL M. ROSENTHAL
and ROE R. ADAMS III

One of the most exciting, fast-paced movie scenes of all time was the incredible running firefight in Star Wars between the evil Empire stormtroopers and the good guys, Han Solo and Luke Skywalker. The flashing laser beams, seen through smoke-filled corridors, provided a dazzling imaginery of futuristic combat. Now, you, too, can feel the adrenaline rush of such a firefight without any of the dangers. Hear the whine of laser beams as they slice through the air, narrowly missing you, and the harsh BUZZ of your equipment, when you take a hit. Where are you? You're in Dallas, Texas at Photon.

Entrepreneur George Carter of Dallas is responsible for Photon's creation. He had a flash of inspiration from watching those scenes in *Star Wars*, and thought a simulation of the combat would be a great attraction. Carter set out to create a futuristic "capture the flag" environment that would take technology to the limit, and put players right inside the game. The future took ten years, and almost one million dollars, to become reality. Photon represents a the first wave of entertainment that Carter is calling, "Interactive Participation Games."

Photon opened on April 2, 1984 in a strip mall on the northeast freeway ring around Dallas (12640 East Northwest Highway — it is hiding behind a Shell Station), and immediately became a press sensation. It has been attracting nearly three thousand intrepid adventurers a week to the 10,000 sq. ft. playing area. Vicarious thrills that are safe, are also rarely inexpensive, and Photon is no exception. Each round of play costs $3.00, but lasts only six minutes. Although the average player spends $12.00 per visit, everyone we met there felt they were getting their money's worth.

Photon is played by two teams of five or six players each. The color of the helmet, either green or red, distinguishes the teams. All the equipment is linked by FM radio signals to two IBM-PC computers, which run the custom-designed software for the game. The computers handle a sampling network that checks the status of every player on a rapidly rotating basis — noting when a player is hit, and crediting the score of the attacking player. A player receives ten points for scoring a hit, and loses ten points for being shot or thirty points for hitting a team. Shooting the enemy Home Base scores a big two hundred points. Each team strives for maximum team scores, while a monthly contest is run for high individual score.

Computers are also utilized to speed up the flow of the game. A polaroid picture of you is taken when you first sign up at Photon. The bar code on the picture is scanned by the computer every time you play. This saves a lot of valuable time retyping all your stats into the computer.

Before seeing the arena, you must go through a lengthy ritual of "suiting up" in the staging area. This bears a close resemblance to medieval knights spending a long period of time getting into a full suit of armor before the joust.

The first layer of equipment is a heavy harness of chest plate and nickel-cadmium

Like a video game, the goal here is to score the most points.

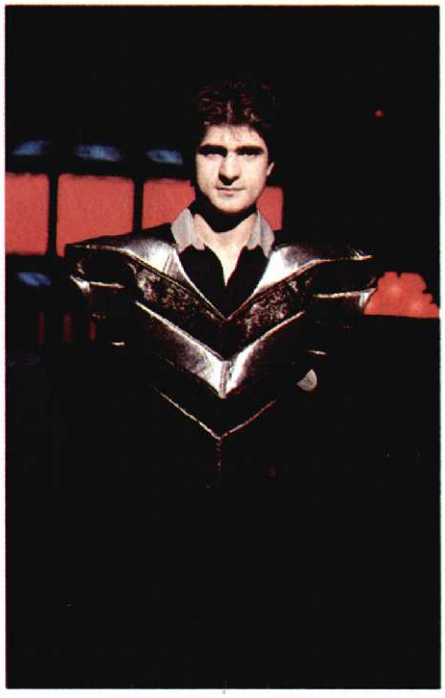
battery pack. The battery pack is the same around-the-waist belt type worn by professional video cameramen on remote locations. The chest plate is studded with L.E.D. light sensors.

A hospital hair net is provided for sanitary requirements, before donning an oversized football helmet. The helmet has L.E.D. lights all over the outside and along the inside visor. The lights show your condition during play. The lights are green when you are functional, and change to amber when you are considered "frozen" due to an enemy hit. Being frozen means that your equipment will pause four seconds.

The last piece of equipment is a light gun, or phaser, which plugs into your battery pack. The phaser emits an invisible beam that registers when it hits one of an opponent's L.E.D.s. The phaser is completely safe to use and does not emit any harmful rays. Inside the helmet, headphones bleep out the three distinct sounds that the phaser makes. A throbbing bass note proclaims a hit on an enemy, while a high-pitched note means you have missed. A warbling warning note indicates you've hit someone on your own team. When an enemy is hit, the L.E.D.s on his helmet and vest flash yellow, and his gun is deactivated for four seconds.

Now that you're all suited up, you await your turn in the arena. The arena is a large two-story interior complex that almost defies description. All the walls are pressed concrete covered with gray carpeting to absorb shock if you run into them. The danger of injury from running into another player is minimized by a rule requiring players to stay at least five feet from each other. Monitors in the arena strictly enforce this rule. The arena is divided in half by a wall that is honeycombed with passages, bunkers, and observation posts. Each side contains a large circular area, which is dominated by a floor to ceiling round tower. The towers emit eerie music and flashing lights which set the futuristic mood for the games. Across the arena from each other are the bases. These are protected, secluded light structures. Hitting an enemy's base is the highest form of scoring. Around the perimeter of the arena on one side is a wonderful maze full of convoluted turns and dead ends. The thrill of not knowing what you are going to meet around the next bend keeps the adrenaline pumping.

"Photon takes the best aspects of Capture the Flag and puts it into the Space Age. It's like playing 'Star Wars.' "



Across the top of the arena is a lattice of connected walkways. Access to the above-ground combat zone is via ramps and stairs scattered around the arena. The game feels entirely different in this celestial aerie. The game on the ground is one of teamwork and power plays. The game on the walkways, however, is one of sniping and individual heroism.

Entering the arena is really weird. What you *know* is just industrial gray carpeting, seems mysterious. Entry hatches gleam seductively, as spotlights throw concentrated multi-hue beams on the railings overhead. Geometric wall designs pulse on and off. Even the ramps leading to the upper level look foreboding.

The teams go to their respective Home Bases and await the start. The silence is unnerving as the lights from the tower undulate in slow strobe. Suddenly a digitized female voice booms out, "INTRUDER ALERT! INTRUDER ALERT! PHOTON WARRIORS, PREPARE FOR STRATEGIC MANEUVERS ON MY VOICE COMMAND. . 3, 2, 1, *GO!*" Weird tunes blare out, the lights pulse and dance back and forth as each team races for enemy terri-

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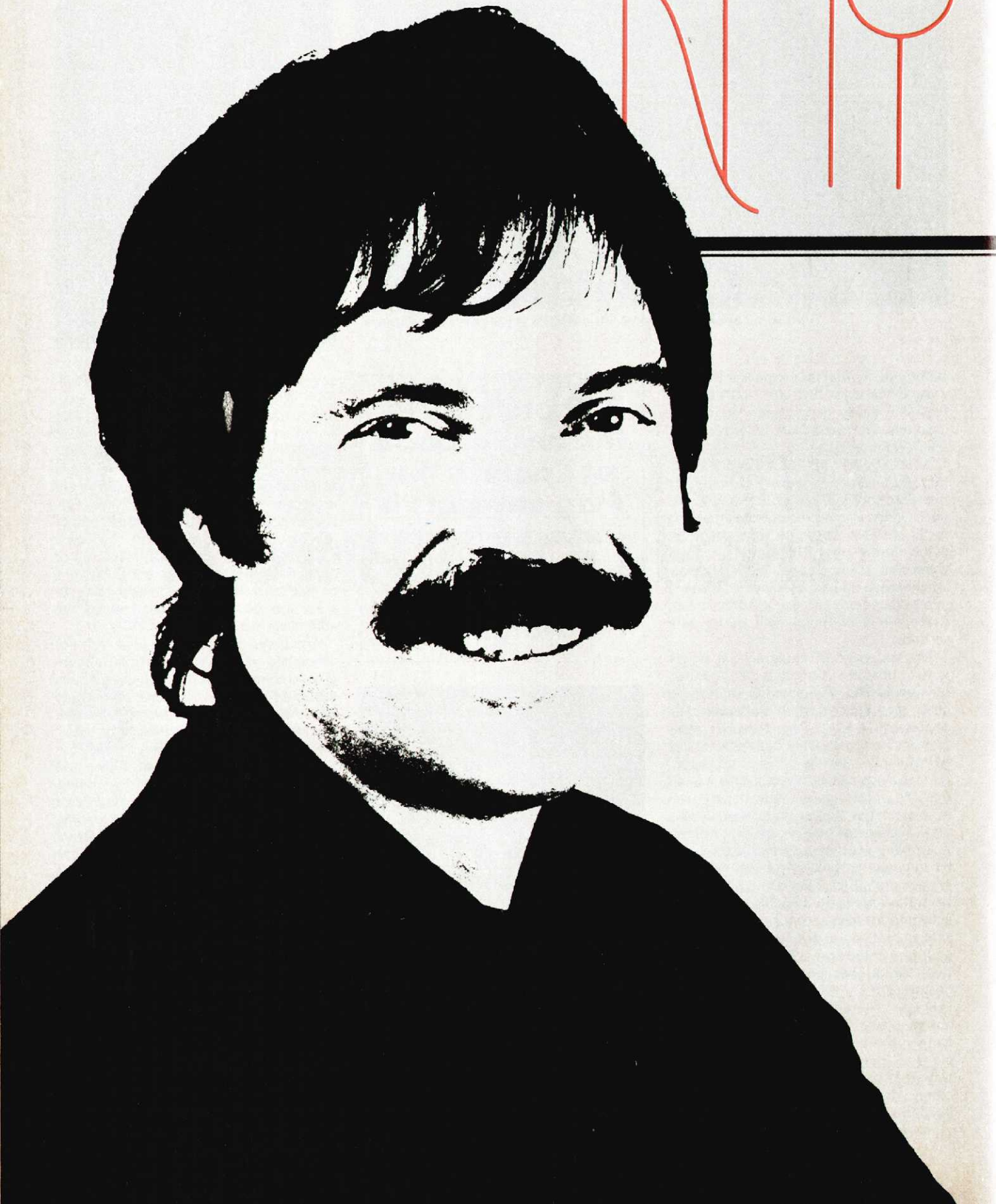
KAY



POWER

A Rare Interview with the Wizard of Icons, Mice and Windows: Alan Kay Talks about What It's Like To Be the Renaissance Man of Silicon Valley.

By STEVE BLOOM

Like the most ordinary computer hacker, Apple's Alan Kay is an anonymous figure outside the polyglot world of bits and bytes. But inside that world he is a hero, a champion of the brave new medium — even a guru, if you will. From Silicon Valley to Cambridge, Mass., Kay is known for his innovations: designs that have rocked the often static hacking community. Above all his numerous creations that date back to 1963 stands Smalltalk, the revolutionary programming language complete with windows and icons. It was first unveiled at Xerox's Palo Alto Research Group (PARC), which he founded in 1972. Simply put, without Smalltalk, there would be no Macintosh.

While heading up PARC as its principal scientist, Kay guided a team of designers and engineers — "by 1976, we had 58 of the world's top hundred computer scientists under one roof," he has said — along a trail that would ultimately lead to an experimental computer called "The Alto." Although Xerox had commissioned the Alto project, when push came to shove the copier company balked at the prospect of marketing the machine. "One of the things it did away with," Kay explains, "was most paper use in the office. It scared most of the executives." Less than a decade later, Apple borrowed many of Kay's basic principles, first channeling them into Lisa, and then more functionally into the Mac.

Kay was just about completing his two-year stint as Atari's "chief scientist," when Apple's Mac came on the market last year. Relaxing at home in Brentwood, Ca., he was surprised to see PARC mentioned in articles in *Newsweek* and *Time*. "I thought, 'My god, none of these reporters ever put in that kind of effort — Apple must have given us credit in its publicity release,' and sure enough, the PR release said where [Lisa and Macintosh] came from. I called Steve Jobs (Apple's chairman) and said, 'That's unbelievable — you're quite a gentleman.' You have to understand," Kay says, "People just don't do that in Silicon Valley."

Consider it one small step in terms of recognition for Alan Kay. Only several months later he took a greater step when he accepted Jobs's job offer from Apple. As of May, 1984, Kay was named Apple's fourth research fellow (co-founder Steve Wozniak, is another — an honorary position as well as a research post. As always, Kay is being paid to stare into California's Pacific horizon and construct visions out of what he sees." I don't have time to get rich right now," says the 44-year-old Kay. "I don't have any interest in forming a com-

pany because there's nothing a company of my own could do for me.

"What sense would it have made for Picasso to form a company? To make money? What he wanted to do was paint. In fact, he couldn't *not* paint." Obviously, Alan Kay has the same problem.

Kay also can't avoid expounding on what appears to be an limitless number of subjects. Analogies, metaphors and historical leaps of as much as 500 years at a time are all part of his conversational repertoire. A former professional jazz guitarist and an expert pipe organist, Kay clearly likes to present himself as the Renaissance Man of Silicon Valley.

EG: How did you feel when you first became aware that the Macintosh was based on much of the work you did at PARC in the '70s?

KAY: I had mixed emotions. Considering the fact that the first Alto was running in 1973, it was a source of pleasure for me that those ideas were suddenly being viewed as new and revolutionary after a decade. But, my god, this could have easily been around so long ago if people weren't so pigheaded and stupid. It's ridiculous.

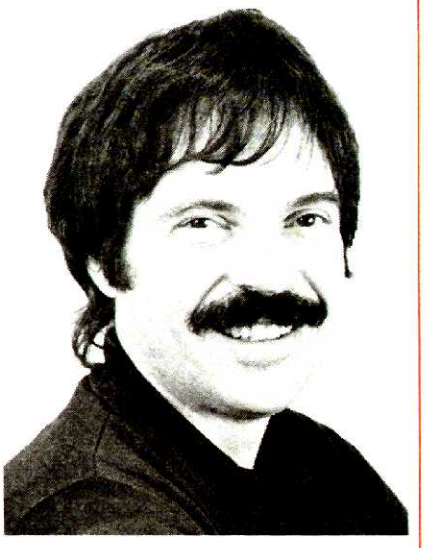
EG: Do you receive any royalties for Smalltalk or any of your other inventions at PARC?

KAY: I will never get a nickel of any kind of royalty for any of the stuff I did, because you can't patent a programming language or a user-interface. It's probably true that programming languages are completely obsolete anyway. In 1978, I said that I was never going to design another programming language, because they aren't the right level of structure for most users.

EG: Does the Macintosh have the "right" level of structure?

KAY: First of all, you have to realize that the Mac is a kind of a toaster. It's obviously not designed for the type of hackers who used to play around with ham radios. It's more self-contained and is generally designed for running applications in an integrated fashion. The first thing I did with it was write a 15-page paper with a lot of illustrations. The **Paint** program is the best I've ever seen on a black-and-white system. He (Bill Atkinson, the programmer) stuck to doing the important things really fast and tried to make everything sensible, which most people don't do. For instance, the hand that changes the window relative to the simulated sheet you're drawing on also works in magnify mode — which is critical, though most people don't do that. I was unable to find a single flaw on that level. Also, he gives you one level of undo on every operation, no matter how hard it was for the system to do that — that one feature is worth its weight in gold. That system alone is selling the computer.

EG: As far back as 1967, while studying for your Master's degree at the University of Utah, you were experimenting with windows as a user-interface. Windows would become an integral part of Smalltalk and the Alto and, of course, now the Macintosh. What led you in this direction?



"I will never get a nickel of any kind of royalty for any of the the stuff I did, because you can't patent a programming language."

KAY: Windows were mainly intended to conserve on display area. Overlapping windows are a way to effectively multiply the number of things you can have on the display simultaneously. They're simple; people understand what they can and can't do; they allow you to make a lot of the operations generic. But windows probably aren't the best of all interaction setups.

EG: I assume that you have figured out what is.

KAY: Well, let's just say that information retrieval techniques are usually really poor, because nobody can remember all the key words and so forth. What you'd really like to have in the home of the future is a librarian, a soft robot that lives inside the machine, a semi-intelligent terminal agent that is an expert at where information is. Not an oracle like they've tried to make in AI (artificial intelligence), but an alter-ego, a coach, a go-fer — like a librarian. That's much easier to do. They'll literally be yours — they might live in a watch and just jump to whatever computer system you're nearby. There are lots of different ways of doing it.

This is not an extrapolation any more than any of the stuff we did at PARC was an extrapolation. The extrapolation is: Networks are going to be pervasive and everywhere. The problem is: There will be far too many resources for anybody to ever find. The solution is: A guide that is an intermediary in that area. The guide, like windows, is an answer to a problem.

EG: What problems did you try to solve when you were with Atari?

KAY: One of the things I was working on is a thing called "interactive movies." All the way back in 1967, when I saw the multitrack movie at the Yugoslavian or Czechoslovakian pavillion at Expo '67, I realized that we should be able to create a 3-D movie that you can inject yourself into continuously, that would have to change as you changed. The important thing is being vicariously injected; having something stop and then ask for branch points, like you do on a videodisk, is no good. The system has to be able to recur back to reasonable story tracks continuously as you weave your way through it. But it's a very hard problem to solve.

EG: Am I to take it that you're not impressed with Nicholas Negroponte's videodisk branching breakthoughs that he recorded at M.I.T. in the 70s?

KAY: Not at all. Nick Negroponte's stuff (e.g., the Aspen Project) has really good user-interface design — in fact, I like his stuff better in a lot of ways than what I did — but very little content behind it. The strongest thing you could say about the stuff we did at PARC is that there was a nice combination between pretty good user-interface design and a fair amount of content/functionally underneath that. Because he was concentrating on user-

Continued on page 70

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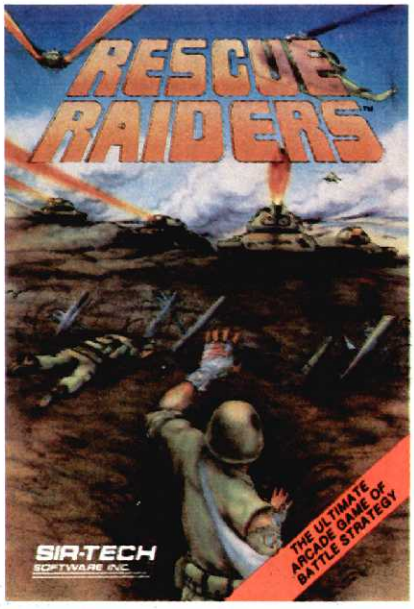

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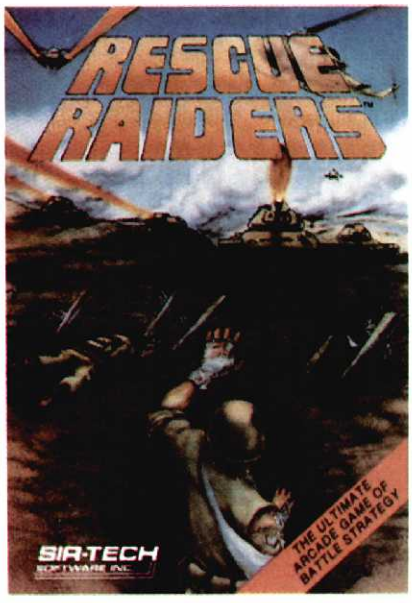


RESCUE RAIDERS

Sir-Tech, 1984/Apple/Disk

Rescue Raiders offers a unique opportunity to enjoy various types of computer-game play all at the same time. It's a hybrid game: part strategy, part arcade, part flying simulation, and part historical science fiction.

First, *Rescue Raiders* features the best helicopter simulation since the immortal **Choplifter**. The joystick controls are tight and you get to perform power dives and incredible loops; you swoop over the battlefield, strafing enemy troops and obliterating bunkers with bombs.

Plenty of strategy is figured into *Rescue Raiders*. There are eight levels of challenges, each representing a different, more difficult battlefield scenario. An interesting aspect of the game is that as the levels increase, the technology of the weapons gets more sophisticated.

The screen is somewhat split. The main section shows the segment of the battlefield that your 'copter occupies, while above that is a small radar screen, like those previously seen in games like **Defender** and **Gorgon**.

You just aren't supplied with an unlimited number of ground forces; instead, you'll need to buy more support — tanks, troops, anti-aircraft missile carriers, demolition carriers, even engineer corps. These support materials don't come cheap. Since you're awarded bags of loot every time you survive a level, that money will have to be spent on reinforcements. All new forces bought start at the home base — there are bases at either end of a long, scrolling corridor — and must quickly be moved up to the front. Timing here is critical, for success on the battlefield leads to longer and longer supply lines.

Opposing you in all of this is a wily computer foe, who does not suffer from a shortage of helicopters. Its 'copter roams the playfield with abandon, shooting up your forces, destroying your installations, and blowing up your tanks. It also has the luxury of being able to self-destruct at any time — you'll know what I mean when one takes a run at you — because the computer just generates more 'copters until you die. Who ever said computer gaming was fair?

The aerial dogfights are practically the best parts of *Rescue Raiders*. The helicopter handles smoothly, making on-the-dime turns, and swift ascents and dives. It becomes quite a stunt evading gunfire from the enemy 'copter, which is also devastatingly accurate, while trying to destroy advancing enemy ground forces, which happen to be equipped with anti-aircraft missiles.

Rescue Raiders looks like a war game, feels like a war game, but plays like an arcade game.

(Roe R. Adams III)

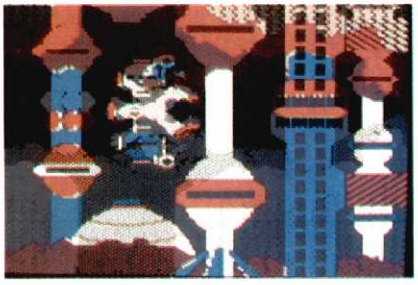
Electronic Games apologizes to our readers and to Penguin Software for the review of Thunderbombs which appeared in the February issue. The game was taken out of distribution over a year ago. We will do our best to see that this kind of mistake is not repeated.

ROBOT ODYSSEY I

Designed by Mike Wallace and Leslie Grimm
Learning Company, 1984/Apple/Disk

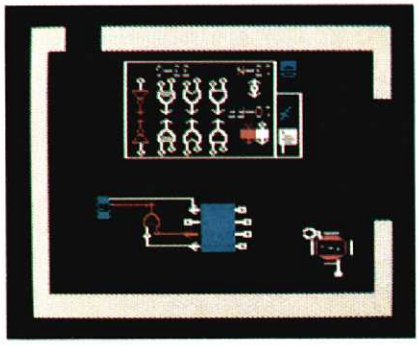
Have you ever wanted to mess about inside a robot, design integrated circuitry or catch up on Boolean logic? No, you say? Well, **Robot Odyssey I**, The Learning Company's sequel to their acclaimed **Rocky's Boots** program, might just change your mind. An educational game of the highest order, it manages to be captivating, challenging and fun while teaching logical and mechanical ideas and skills.

One thing you'll notice immediately about *Robot Odyssey I* is how well it's put together. Like Gaul, the program is divided into three parts: a tutorial, which introduces the basics of robot anatomy and circuit design; the lab, where you can practice building robots to perform specific tasks; and the game, which requires you to



escape from Robotropolis, an underground city inhabited by both friendly and treacherous robots, and get back to civilization and your warm bed. Robotropolis is built in five ascending levels, and you must solve each one to pass upward to the next, more difficult stage. First comes the sewer, where the robots already there will help you escape. In the next level, the subway, you have to rewire a robot. Then comes the town, where you must build a chip and use it to program a robot. Next you get to the master control center, and finally the skyways . . . all in all, it's an adventure challenging enough to keep you struggling — and learning — until the real robots get here.

What's most remarkable about *Robot Odyssey I* is its complexity. Each robot has four thrusters to guide it, four bumpers that detect contact with walls, one eye, a grabber to pick up objects, an antenna that sends and receives signals from other robots, and a rechargable battery that



powers the whole contraption. How a robot moves and what it does depends on how all these parts are connected. Since controlling the good robots is the only way to escape Robotropolis, you'll need to know how to wire them — which means figuring out how to make electricity flow through the right circuits. For instance, if you want a robot to move up and signal when its right side hits a wall, you wire the output of its right bumper to the input of the upward thruster and also to the input of the antenna. You'll need to use an electricity-splitting node to send energy in two directions at once. And you do your own soldering and other manual labor.

This level of complexity is double-edged: if you don't much like tackling logical and mechanical puzzles, you won't care much for *Robot Odyssey I*. And if you like to start playing a game right away, without bothering with the directions, prepare to be totally mystified. But take the time to really get into this program — and out of Robotropolis — and you'll find it will more than repay your efforts.

(Dan Goldberg)

THE HITCHHIKER'S GUIDE TO THE GALAXY

Designed by Steve Meretzky and Douglas Adams
Infocom, 1984/Most systems /Disk/$49.95

Well, you don't have to make a map.

Anyone who's ever run across "The Hitchhiker's Guide" in any of its previous incarnations will know pretty much what expect from this program: pure lunacy. In fact, there are only two problems with **The Guide**: it's not logical and it doesn't make sense. And if you think that's redundant, you obviously haven't played this one yet.

As a text adventure, *The Hitchhiker's Guide to the Galaxy* starts out almost exactly like all the other versions: Arthur Dent, well-intentioned but ineffectual nebbish, rises one sunny morning to find that a bevy of bulldozers is preparing to raze his home. Obviously, one's first thought will be to get out of said home quickly — but this is not as easy as it sounds. In fact, one of the things this program accomplishes brilliantly is actually turning the player into Arthur Dent. You may start out your own intelligent, adroit self, but before long you'll be bumbling along in a haphazard, Arthur Dentish fashion.

The broad outline of the story will also be familiar. Arthur Dent is fortuitously rescued from a doomed Earth by his pal Ford Prefect, a native of another galaxy altogether, by way of a Sub-Etha Signalling Device, or 'Thumb'. Eventually they end up on the Heart of Gold, an impossible ship powered by the Improbability Drive, which has been hijacked by Zaphod Beeblebrox, the two-headed (but otherwise human) President of the Galaxy. So far, simple, right? Just like the book? Just about here the similiarity ends.

There will be the odd familiar character throughout the game, like Marvin, the chronically depressed robot, and Eddie, the over-protective computer. However, there will also be insane situations for which no amount of reading, listening or viewing will have prepared the player. Just how would you go about convincing a supercilious door that you're intelligent — just to get it to open? And does it matter? What about a nice cup of tea? You don't seem to have been yourself lately.

Be prepared for one thing: unlike the other Infocom games, this one lies to you — just as a joke between friends, of course. And like many friendly jokes, it wears thin with repetition. There is at least one instance where the gamer has to use the "look" command more than once befor the program will admit there's anything to see. Always consult the Guide about everything possible — check the footnotes, too. They're rarely helpful, but most of them are funny. And be prepared to spend a lot of time in the dark — physically as well as metaphorically. In fact, so much time is spent in the dark that one begins to feel like the infamous bowl of petunias: "Oh, no, not again."

The only drawback to *Hitchhikers* — and admittedly this is picky — is at the beginning. If you're familiar with the book, it may seem that there is too much obligatory wait time. There may seem to be a few too many repetitious situations in the game, too, but this is actually consistent with the off-the-wall logic involved.

Trying to unravel the puzzles and paradoxes in this program may reduce the gamer's brain to the level of the Bugblatter Beast (consult Guide for details), but *The Hitchhiker's Guide* is well worth the effort required to successfully complete the adventure. It can also be absolutely maddening. When this happens, go ahead, panic; after all, worse things happen at sea.

(Louise Kohl)

SHADOWKEEP

Designed by Ultrasoft
Telarium, 1984/Apple II/Disk/$39.95

Shadowkeep is part of Telarium's (formerly Trillium) new Famous Science Fiction Authors Collection. The game is based on a novel of the same name written by Alan Dean Foster.

This is a large game on four disk sides, comprising seven dungeon (well, actually

tower) levels. The graphics are the old, comfortable **Wizardry**-style corridors, but Ultrasoft, has added a new twist: Telescoping animated hi-res monsters for the combat scenes. When your party enters a square where combat will occur, pictures of each monster grow out of the farthest wall and rush toward you.

Up to six monsters of different types can be shown on the screen at once in two rows of three. During the hacking and slashing each monster actually goes through a little four-step hack-and-slash animated routine. As the figures are very large on the screen, the effect is quite good. Some of the higher level monsters in the game, like the ghosts and demons have more fantastic movements.

Shadowkeep allows you to create twenty characters, up to nine of whom can participate in forays against the evil forces of the arch villain Dal'brad, who has occupied the Keep. Your party must enter the Keep to free the imprisoned good wizard Nacomedon, and restore him as the rightful owner.

The choice of racial types is quite unique, as are the character classes available. Adventurers can be Zhis'ta (bipedal reptiles with the cunning of a fox and the moves of an alley cat), Roo (kangaroo-like marsupials known for their forthrightness, endurance, and fighting skill), Thalidar (a race so old that they have mind-over-matter powers akin to magic), and, of course ordinary Humans.

The player will have fun discovering the talents and limitations of some of the weirder character classes. There are rune-mages, shadowmages, necromancers, monks and warriors. The magic-users each have their own table of exotic spells. The best party formation seems to be made up of one from each magic class, and two from each fighting class.

The combat sequences require each member of the party to choose a weapon, and put on their armor. For each combat round, the player has to select for each of the nine characters exactly what that character will do that round. While that does not sound too complicated, after a few hours of playing this combat structure becomes really tiresome.

One other aspect of the combat mode also causes massive confusion: the movement keys are the same as the combat keys. To move forward the player types "F", and to go right he uses the "R" key. In combat mode, "F" is used for Fight, and "R" is used for Run. The difficulty becomes apparent, when you realize that a combat sequence is triggered upon your entering a square. As the combat is only noticable when the monsters gradually appear on the screen, and then from very small to large, the player will not initially realize that a combat is occuring. So, he will continue typing the next direction key. The game, of course, promptly interprets this as a combat key. The player thus finds himself fighting without using any weapons, usually resulting in his party taking heavy casualties, or running away from a fight when he would rather have stayed and fought. This is a perfect example of poor "user interface" with the game structure.

Shadowkeep is a very good program for a person learning how to play a fantasy role-playing computer game. The puzzles are fairly straightforward, and the mazes not too complicated. The slow speed of the game will be an asset to a new player for whom most things always seem to rush by too fast. The animated monsters will also delight and amaze any player. Far too few games are tailored these days for neophyte adventurers, so keep *Shadowkeep* in mind.

(Roe Adams)

SUSPECT

Infocom, 1984/Most systems/Disk/$44.95

As usual, things are just not going your way. The first time you're invited to a society affair, there's a murder and you're a prime suspect. Your mother was right. Can't take you anywhere.

Of course, as the prime suspect in this case you do have several choices. You can go outside into the backyard and get lost in the fog. You can hang out in the ballroom and pretend you're interested in what the werewolf has to say. You can hide the body. Or you can try to solve the murder yourself and prove that you didn't do it. This is easier said than done. You see, the only evidence is fairly screaming "Arrest the cowboy!" and guess who's wearing the cowboy suit?

But let's start at the beginning. Your hostess, Veronica Ashcroft is one of those wealthy horsey types. She lives in one of the last of the great Southern mansions, a modest little affair on the order of Tara — or Georgia. Some unscrupulous carpetbagging realtors have started buying off several of the great estates, dividing the land into smaller lots and building little estates. In other words, these's an outbreak of suburbia in the area. They want Veronica's land. Veronica wants Veronica's land and trouble is brewing. But for now, all of this can be put aside until after the Halloween masqued ball, a local tradition for 110 years, is over.

Or can it? At approximately 9:19, Veronica Ashcroft is found dead in the office. She has been strangled by a lariat, the kind that came with the cowboy outfit you rented. A silver bullet is also missing from your gunbelt. All you have is your reporter's notebook, a pen and, if you're lucky, a drink. You have 12 hours to prove you didn't do it. You know you didn't do it. You know you were tangled up with Smythe the butler and some clumsy late arrival at the coat closet at the moment the murder

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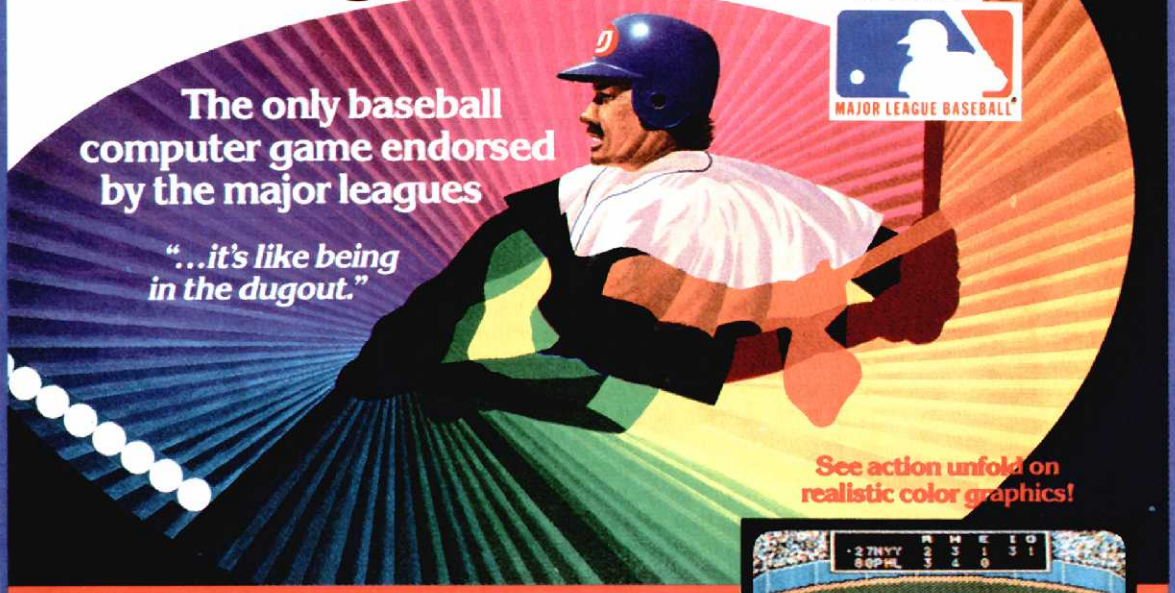

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was committed. Smythe knows, too, but he's not talking. The object is to arrange it so that everyone knows.

As usual, the writing is witty, the support material is classy and the repartee between you and the computer better than most conversations you have with friends. Like all Infocom games, there's a cast of other suspicious characters, made all the more bizarre and weird because they're all dressed up like astronauts and sheiks and vampires. Fortunately, some of the more annoying aspects of other murder mysteries such as **Witness** have been left out — there's very little waiting around for something to happen. Equally fortunately, some of the more sensible aspects of *Witness* have been left in: You get to have a drink. Have two. You'll need them before the evening is over.

Fans of **Deadline** will be happy to know that the loyal Sgt. Duffy is back and is still a master of silent departures and arrivals. He does not recognize you from past cases. This hurts, but life is cruel. It's best not to dwell on it. Instead, bury yourself in your work. Hunt for evidence which will clear your reputation. It's not easy to find but don't give up. As long as you keep handing the detective items that cast a reasonable doubt on your guilt, you buy time to look for the definitive clue that will prove your innocence.

(Randi Hacker)

ON-COURT TENNIS

Designed by Ed Ringler, Scott Orr and Dan Ugrin
Gamestar, 1984/C-64/Disk

Translating competitive sports onto floppy disk has been a chancey business on the whole. No matter how good the graphics and gameplay are, most of us feel that neither the joy of victory nor the agony of defeat match their real-life counterparts. **On-Court Tennis**, however, may be one of the programs to change this. Part of the reason for this is that tennis — which in either real or electronic life is a prime test of hand-eye coordination and judgement — lends itself particularly well to the translation. The rest of the reason is that this is a very good — if not perfect — sports program.

The graphics here are fine, but not phenomenal. The music is nice, but superfluous. But the gameplay is excellent and smooth — real enough to bring on at least a psychosomatic case of tennis elbow.

On-Court Tennis gives you a choice of three court surfaces — grass, clay and hard court — on which to play. In addition, you can choose to be one of four different players, whose athletic virtues are described in the manual. Then you go for best two out

of three or three out of five matches. (If you're feeling a little out of shape, you can opt for a warm-up set.) So far, this is all a matter of the menu and function keys; the joy and agony parts come in with the actual start of play. Naturally.

The computer considerately takes care of running your player around the court and changing serves. This leaves you free to concentrate on hitting the ball. Sounds kinda easy, you say? Piece of cake? Wait 'til you try it.

You see, this program allows you to figure and change the angle of your serve or return, place the ball, choose the amount of spin, go for a drop shot — we're talking sophisticated tennis here. But first you have to learn to hit the ball at all. This is going to take some time. Well, we all have to learn to walk before we can run. Or something like that.

I found that *On-Court Tennis* not only simulates the game in general, it seems to simulate my own peculiar brand of it. It was frustrating, exciting — and I had trouble with my serve. Every so often my player would turn to face me as if to say, "What the hell did you do that for?" I wish there was some way to tell him that I always get the racquet with the hole in it.

(Louise Kohl)

ROBOTS OF DAWN

Epyx, 1984/C-64

This text murder mystery challenges the player, as the Isaac Asimov hero 'Lije' Bailey, to solve a crime on a planet populated mostly by benevolent robots. Doctor Fastolfe, the victim, was one of the leading experts in robotics technology. The suspects include his chief political rival Amadiro, his daughter Vasilia Aliena (who now works in Amadiro's Robotics Institute), Fastolfe's good friend Gladia Solaria, and her lover Gremionis. The murderer and motive changes with each new game, making **Robots of Dawn** playable again and again.

Not that this isn't styled like a standard adventure game. The player inputs movements (GO N), actions (TAKE BOOKFILM) and the three possible questions (GLADIA, TELL ME ABOUT AMADIRO. DID HE HAVE A MOTIVE? DID HE HAVE THE MEANS?) by way of the keyboard. Unlike, say, **Murder on the Zinderneuf**, the player must first solve the adventure game-type puzzles before accusing a single suspect.

One really nice innovation is the use of color to separate different sections of text. Room descriptions are in one color, the player's movements in a different color, and suspect quotes are displayed in a third. It's so much easier on the eyes it's wonder no one seems to have thought of it before.

The program comes with a dossier envelope, which contains names and facts about each suspect, the letter from Daneel which summoned you, and a few items, like your ticket, thrown in just for fun. All in all, the packaging is similar to an Infocom game's, with vital information mixed in with souvenirs.

The sentence parser is good, but not as sophisticated as some. Try typing in something the computer doesn't understand, and it says, "Please rephrase that," instead of pointing out possible mistakes.

Robots of Dawn has been changed a bit in its journey from the bookshelves to the monitor. The designer even changed the murder victim to even up the sides between those who read the book and those who didn't. Since it's a timed game — 'Lije' has only a day in which to find Fastolfe's murderer and present the evidence to Mr. Chairman — it plays a bit shorter than most text adventure games. In real time, a game played from start to finish without being saved lasts a few hours, long enough to get into the feel of the game, but too short to be tedious.

(Tracie Forman)

LUCIFER'S REALM

Designed by Jymm Pearson and Norm Sailer
American Eagle, 1984/C-64/Disk/$39.95

Not since Dante met Virgil has the phrase "go to hell" been taken so literally.

Promising encounters with "Hitler, Mussolini, Reverend Jim and Satan himself," **Lucifer's Realm** drops you off in the land of fire and brimstone where you have to regain your lost soul and escape to Heaven. This is certainly an interesting, if bizarre, plot for an adventure game to have and, to give credit where credit is due, the game itself is interesting. It is also bizarre. Unfortunately, what it is more than anything else is awful.

Lucifer's Realm opens with the player on his (yes, the computer does identify the player as male) deathbed in a hospital, being visited every so often by a fat little doctor and a nurse whose optimistic comments include, "He will die very soon." Not soon enough, though, as the player must wait for quite a long time before actually breathing his last — and even the command 'DIE' doesn't speed things up. Throughout this period and the angelic judgement which follows, you are unable to do anything other than enter such exciting commands as WAIT and LISTEN.

Once you arrive in the Underworld, you're dropped into an illogical and entirely linear adventure, the extent of whose puzzles never exceeds two commands. What's more, these puzzles don't require imagination or intuition so much as mechanical trial-and-error. For example, the one-page instruction sheet suggests that in a situation where the command 'OPEN DOOR' does not work, the player should try 'CLIMB DOOR.' If there is any logic behind that advice, it has managed to completely escape me.

Logic aside, *Lucifer's Realm*'s parser (the game's command system) is the worst of any adventure game on the market today. Accepting only two-word commands in a noun-verb construction, the game's extremely limited vocabulary and inadequate responses make it extremely frustrating to interact with. For example, the response "Try something else" is given both when the player does something useless and when a command is entered incorrectly or is misspelled. Therefore, 'PUSH WALL' elicits the same response as 'PUSH FRDDPA,' or even 'GLF FRDDPA.'

The game's graphics are good, but very sparse — one dark tunnel looks much the same as another. Items that are shown on screen cannot be picked up and used because they are not considered "visible items." Why do they bother to show them at all, in that case? For that matter, why are there any graphics at all in the game if they serve no purpose?

During the game, the computer continually toggles between graphics and text screens. The text screen is poorly constructed, with only three lines for text and one for commands; the rest of the screen is taken up by a running inventory, a list of visible items, and the words "Lucifer's Realm" — in case you forget what game you are playing. The running inventory is a good idea, but it is ruined by the fact that there are only about a dozen items scattered around the entire game, making such an on-screen tally pretty useless.

Having been condemned to spend eternity to Hell, you are resurrected every time you "die." This takes away any tension the game might have had, and makes it not only frustrating, confusing, irritating and incomprehensible, but boring as well. *Lucifer's Realm* was an interesting concept, but its execution is horrendous — if you have forty bucks to spend on software, you'd be better off looking elsewhere.

(Charles Ardai)

Fahrenheit 451's artists have devised some of the best graphics ever seen in any graphic adventure.

FAHRENHEIT 451

Designed by Ray Bradbury and Byron Preiss, Inc.
Telarium Software/C-64/Disk/$32.95

One of Bradbury's most famous novels, *Fahrenheit 451* introduced to the world a bleak possible future for our society, a dismal, censorship-ridden society whose greatest crime was free thought and individuality. The book dealt with people's growing passivity, their constantly increasing reliance on other people and machines to think for them; Bradbury soundly condemned "mindless" technology, the sort that allows people to spend hours transfixed by their television sets. In his novel, Bradbury conceded that, if used correctly, such technology could actually stimulate thought, with the arrival of the **Fahrenheit 451** computer game, he has his chance to prove it.

Oddly enough, *Fahrenheit 451* works very well, both as an exciting and unique adventure game, and as a thought-provoking statement about freedom of thought. The game begins several months after the end of the book, with the player as ex-fireman and rebel, Guy Montag. Once again Montag is a fugitive, and is swept along on a wave of fear and suspicion, not sure whom trust or avoid — and this time, it's your job to make those decisions for him.

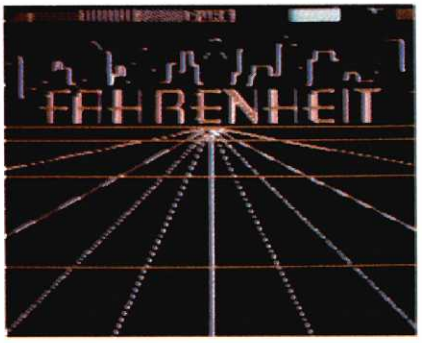
Ostensibly, the player's long-range goal is destroying the powerful totalitarian regime and also to topple the destructive hierarchy of the Firemen of the 451 Corps, a group ordered by the State to burn all books in existence, as the repositories of forbidden thoughts and ideas. However, at the start of the game your objective is merely to survive as a fugitive in a dangerous city. As the game progresses, you'll be required to make alliances, search out members of the "Underground," and on the whole, make sure that Guy Montag does his part in helping the rebellion along.

Rather than focusing on typical adventure game logic puzzles and sword-and-sorcery battles, *Farenheit 451* concentrates on character interaction. The game's twin double-sided disks hold plenty of area to map and plenty of original and challenging puzzles to solve, but the emphasis is on the human element, which, after all, is only fitting.

The game has a high-quality parser, able to digest full English sentences. The vocabulary is extensive — though I found a number of words that I would have liked to use but couldn't — and a partial vocabulary list is included with the game along with an encoded hint sheet. Whether this is a blessing or a curse is up to you to decide.

Fahrenheit 451 also uses an intriguing graphics system common to all of the Trillium games designed by Byron Preis Video Productions, Inc. It reserves three-quarters of the screen for inventively color-coded text (Hooray!), unfortunately leaving only a thin row at the top of each screen for graphics. Even with limited space, though, the game artists should be congratulated for devising some of the best graphics ever seen in any graphics adventure, which include some magnificent renditions of a future New York City.

The game's prose is good, though a little humor would have been nice to dispel the claustrophobic sense of despair that hangs over all the action. Although the atmos-



phere really captures the feeling of the novel. There's only one problem with the game — it takes an interminably long time for computer access and response, and even longer to change the graphics screens. However, this is mainly the fault of the hardware, and will presumably be corrected in other versions.

All in all, *Fahrenheit 451* is a good adventure, with original situations, plotting and characterizations. It is quality entertainment, to be sure. But perhaps even more important, you can't avoid thinking about the situations it proposes — which should go a long way towards keeping them fictional.

(Charles Ardai)

CABBAGE PATCH KIDS PICTURE SHOW

Coleco, 1984/Adam/$39.95

It seems that news of the Adam's death can no longer be considered exaggerated. This situation leaves some of us with regrets and some of us with "posthumous" software, like **Cabbage Patch Kids Picture Show**.

Simply put, this game is bad. On the whole, the idea of making a graphics program like **Movie Maker** with Cabbage Patch Kids as the stars of the homemade movies is one that many, especially Cabbage Patch lovers, will find appealing. However, the program is horrendous, a bad surprise from Coleco, a company whose games are generally excellent.

The program asks the player to choose characters costumes and scenery; place props and paint the surroundings using an overlay and the joystick controller. Then the characters can be animated with the joystick. After all of this work, the program lets a player use the playback mode to view his or her creation.

There are some problems though. For starters, there are a total of four characters to choose from — a far cry from a cast of thousands. To make matters worse, one of them is a Koosa animal pet which looks like a lump of fudge ripple ice cream with legs. Not much to work with there.

Costumes? Sure. Choose between diapers and a pant-shirt combination. The girl can wear a skirt, but not pants. Again, not a wide variety of choice.

The scenes are good, though the graphics are a bit chunky; at least the front lawn is recognizable as such. The props, on the other hand, are not exactly high-resolution. In fact, some are so chunkily drawn that they can't be identified at all. It makes sense that a complicated program would have to sacrifice quality somewhere, but for a graphics program to sacrifice graphics is ridiculous. The background music selection is impressive, but much too repetitive. Why couldn't they have dropped this and improved the graphics?

No one that I can think of will like this program. For graphics-oriented players, it is too simplistic. For young kids it is too complicated. There isn't enough of the Cabbage Patch spirit to please fans of the dolls, who already have a pretty good game, while there is just enough to irritate everyone else. The program is technically too cumbersome to appeal to programmers and not versatile enough to catch the eye of young would-be artists. For goodness sakes, the maximum length for a recorded sequence is about five minutes, and it can't even be saved for posterity!

Quite simply, this is one program that should be sent back to the Cabbage Patch.

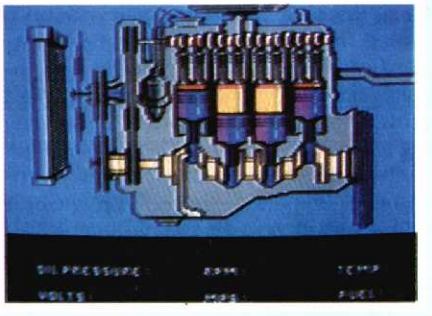
(Charles Ardai)

INJURED ENGINE

Designed by Dave Johnson
Imagic, 1984/C-64/Disk

Everyone who drives a car needs to know how to keep it in good shape and running properly. Now there's a better way to learn about engines than the ol' trial-and-error, which can prove an expensive method for finding out how to maintain an automobile.

Injured Engine simulates a functioning auto motor. Cut-away graphics depict each part of the engine in operation, with full text explamations of exactly how each part works, what it does, and how it interacts with the other parts of the motor. Common problems are explained, along with signs to help drivers diagnose troubles when they occur.



First the gamer sees the engine working properly so he or she can study each part. To play the game, choose engines with 1,000 miles (easy), 40,000 (medium) or 80,000 miles (hard), then try to troubleshoot when problems start. An instrument panel indicates how the engine is running, the temperature and oil levels, and pollution level of the exhaust. Cost-per-mile and miles-per-gallon gauges give constant indications of the motor's efficiency. By moving to the repair shop screens, the would-be mechanic can study each part of the engine to determine what's wrong, then replace or repair the damaged parts.

The object is to find and correct one problem as quickly as possible; then the gamer has to repair an engine with two broken parts. This continues until the computerist manages to repair a motor with five major problems, and the score is the time it takes to accomplish this.

This unusual simulation is ideal for anyone who needs to understand motors just a little better. It's not too difficult—even a complete mechanical novice will walk away from a play session knowing more than when the simulation started. The graphics are extremely realistic, except that everything is done in glowing colors, to make it easy to tell one part from another. (Besides, a game where every part was oily black would have just looked messy!) The textual explanations of all the parts are easy to read and understand, even for someone with no mechanical aptitude beyond the ability to turn on the computer.

Injured Engine can make every driver more aware of what's happening inside the car, so that when problems do arise they'll feel less at the mercy of the filling station attendant. It may not turn you into a registered auto mechanic, but it will make it easier to talk knowledgeably to a repairman when your car needs help!

(Joyce Worley)

PLAYWRITER: TALES OF ME AND ADVENTURES IN SPACE

Woodbury Software, 1984/C-64/Disk/ $39.95; Refills, $9.95
Also available for Ap, IBM

For anyone who has ever wanted to be a writer, and especially for children, teenagers, and adults with lots of imagination, Woodbury Software's new **Playwriter** series has a lot of offer. The series consists of an expanding library of creative writing aids, and rather than being an impersonal tool like a word processor or a story teller like most adventure games, *Playwriter* lets hopeful authors write their own tales, with assistance from the computer, and eventually end up with an illustrated, hardcover book. Each program comes complete with special paper to print the stories onto, as well as binding and plenty of illustration stickers, and full-page illustrations which are generally vague enough to fit at any place in a given story.

At the simplest and least interactive stage, an author only has to answer a series of multiple choice questions. The compu-

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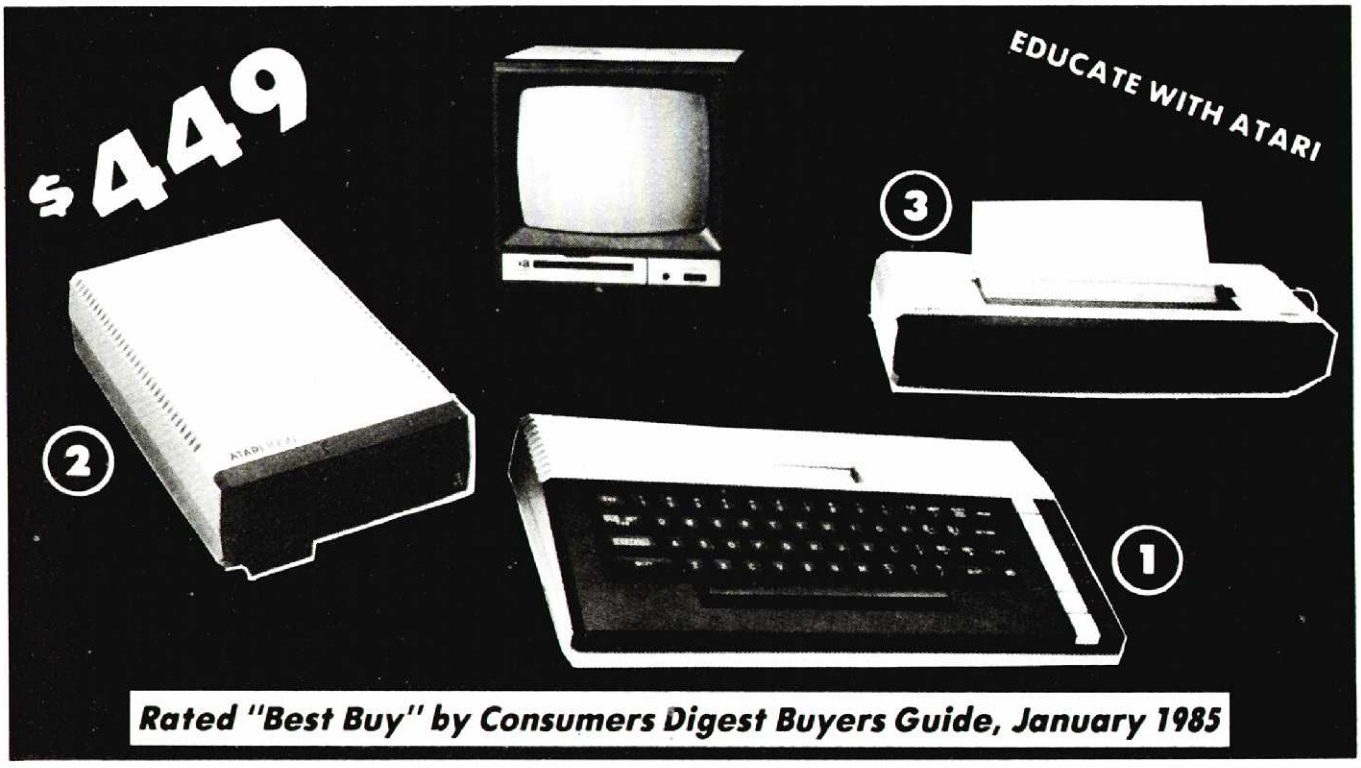

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ter then works the responses into its own story. For a very young writer, this may be enough, but for older or more adventurous players, the program lets users write entire passages in response to its prompts. All of the programs also contain a full-function word processor and editor so that players can fiddle around with any part of the story that they aren't satisfied with.

Each program starts off with a basic concept. For instance, *Tales of Me* has the player write a fictional biography, while *Adventures in Space* follows a science-fiction storyline. From this starting point, the program allows you to take the story just about anywhere you want to. The first questions that the program asks are simple ones: What is your name? What is the main character's name? Where does your character live? Gradually, the questions require more thought: How does Mark earn the money to buy the spaceship? Many questions, come with multiple-choice list of possible answers, though there is always a choice marked "Other" for these who want to make up their own answers. The suggested answers are creative and funny, as are the questions and prompts. The entire program oozes friendliness from the cheerful opening screen to the choices on the inter-screen memos; if ever a program was user-friendly, this is the one.

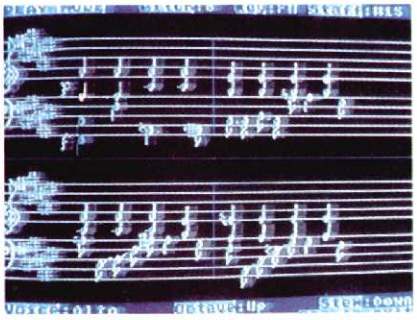
Best of all are all the little touches; for instance, every time the computer accesses the disk drive, the program prints out a riddle to pass the time. This is especially good on the Commodore 64 version, where disk searches seem to take forever. (Unfortunately, this also means that users have to wait a long time to find out the answers to such questions as "What happens if you don't pay your exorcism bills?" Incidentally, the answer is: "You get repossessed.")

The *Playwriter* series deserves recognition as being not only fun and creative entertainment, but also as a truly useful educational tool. *Tales of Me*, *Adventures in Space*, *Mystery*, and the forthcoming *Caverns and Creatures* can introduce youngsters to writing in an easy, friendly atmosphere and at their own pace. *Playwriter* engenders creativity and fosters imagination — it is educational software at its best. *(Charles Ardai)*

BANK STREET MUSICWRITER

Designed by Glen Clancy
Mindscape, 1984/
C-64/Disk/$49.95

As a professional musician of conservative tastes, I don't really believe the computer will ever replace the composer's pencil and staff paper the way it has the



writer's notebook or typewriter. But I have to admit that **Bank Street MusicWriter** is a beautifully designed program. It does everything for writing music that a word-processor does for writing text: write, insert, delete, copy, load, save, combine files — even format a disk while the program is running. In addition, it plays back all or any parts of the composition currently in RAM, and prints out readable scores. The writing itself goes more slowly than it would on paper, but the printing, editing, and playback functions make up for that. This is especially true for non-keyboard or beginning keyboard musicians, who would have difficulty playing back three-voice compositions.

"User-intimate" is the byword for this program. The on-screen music notation is very clear, and the prompts are practically foolproof. Best of all, designers have finally chosen keys for the different commands which are perfectly sensible and easy to memorize: [CTRL] C for copy mode, # for sharp, f for flat, "." for dotted note, b for bar line, 4 for quarter note, 8 for eighth, 6 for sixteenth, etc. They've even substituted four letter keys in a square (I, J, K, and M) to replace the C-64's clumsy cursor keys (although those also work, for those who've grown accustomed to them).

The main menu offers an "album" option, which plays all the compositions on the disk in order, and a "jukebox" option, which lists the compositions on the disk, and allows you to select one by its code number (e.g. "A3"). Other options include a time-signature check, for locating the measures in which you've accidentally placed four-and-a-half beats; "slur mode," for entering many slurred notes without having to specify each one as slurred (not for insulting your fellow composers); "tempo selection;" and "tone-shape," for altering the waveform, envelope and articulation of each voice. This last option is not as sophisticated as a dedicated synthesizer program, but surprisingly flexible.

The instructions provided are clear and complete, including a tutorial, and an introduction to the fundamentals of music and notation, which is about the best eight-page coverage of the topic you can ask for.

There are a few problems in this program. The copy mode seems to copy notes, but not bar lines; you have to go back and put them in. You can't delete voices separately. In copy and delete modes, it's difficult to scroll from one staff to the next; instead of the single keystroke available in edit mode, you have to walk to the end of a staff and "jump off." In playback, if there are fast notes at the end of a staff, the program stops to catch its breath before moving on to the next staff.

All in all, *MusicWriter* is an enjoyable and educational program, especially for the neophyte musician who's eager to try his hand at composing.

(Henry Jones)

COMPUZZLER

Uptown Software, 1984/
Apple/48K disk/$39.95

Crossword puzzle fans, get ready for a treat. **Compuzzler** turns the paper-and-pencil pastime into high-tech entertainment. The computer takes care of all the messy details, liberating you forever from the #2 lead pencil.

The puzzler chooses from 70 offerings on the disk, arranged according to difficulty. The size of the grid varies from 15 by 15 to 21 by 21 on the more difficult puzzles.

The puzzle grid fills most of the screen, with command features running down the side to make it easy for the gamer to choose options. At the bottom of the screen, the computer presents two clues at a time (across and down), changing these automatically as a cursor moves around the grid.

Typing a word puts it into the puzzle. The gamer can verify the answers at any time, which removes any incorrect letters. There's even a way to cheat: a player can peek at the letter in the square occupied by the cursor. The computer does, however, keep an embarrassing running tally of errors and hints.

Although it's a good solitaire diversion, *Compuzzler* really comes into its own when there's a crowd of players. It's the first-ever competitive crossword puzzle game, for up to four individuals (or teams). Each player begins play in one of the corners, and fills in words from that point. Players can only fill squares that branch off from spaces they've already filled, and each competitor's framework of words is displayed in a different color so it's easy to see who controls the most area on the board. The object is to enter as many words on your own framework as possible, while blocking the opposing teams from

access to open spaces.

Playing *Compuzzler* well depends as much on good strategy as word skills. The winner will inevitably be the person or team that places words in such a manner as to bar their opponents from putting down any letters.

The program will allow you to change options in many ways. There's a choice of eight type styles for the puzzle, and even a dozen design patterns for the dark squares. Gamers can choose dark letters against a light background, or vice versa. Scoring can be altered to count either whole words, or letters. If the party plays out before the game is finished, it can be saved until later, or can be printed out, if you like.

Uptown Software will sell "refill' puzzle disks. The publisher promises that all puzzles will be of high quality, with true grid symmetry, less than 35% blackout squares and no two-letter words.

Editions are also available for the Commodore 64, IBM PC and PCjr computers.

(Joyce Worley)

CYBERWORLD

Designed by S.A. Moore
Progressive Peripherals & Software, 1984/
C-64/Disk

The first challenge you face with this two-disk action-adventure is loading it. **Cyberworld**'s copy protection is touted as virtually fool-proof, seems to cause as much trouble for the legitimate user as for any software pirate. There are two sets of loading instructions, but this reviewer couldn't get the program to boot using the first set after trying repeatedly with two different game disks. The second set works most of the time, though it involves some fancy disk flipping. We're running into the law of diminishing marginal utility here: The game is protected from the just and unjust alike.

Similar problems run through the game. PPS calls *Cyberworld* "the most challenging arcade adventure ever developed for your Commodore 64." That's certainly one way of looking at it. However, other descriptions may also spring to mind, such as "frustrating," "infuriating," "maddening," and "expletive deleted."

The idea behind *Cyberworld* has a lot of appeal. The game includes three different scenarios: on-board an enemy Drokon warship, on the surface of Cyber during a Zaxxar raid, and a space sequence. On the warship, the objective is to pick up just about everything that isn't nailed down and just plain survive. The play-mechanic in this sequence is a bit unusual: the player can move the on-screen character around with either the keyboard or joystick, and can toggle into text mode in order to identify the objects in a room and to pick them up. In addition, the function keys can be used in text mode.

The toggling to text mode is not as smooth as one might like. Very often, when the player hits the fire button or space bar to get to text mode, the computer reads it as laser fire and just says, "Nice try." This is not only annoying, it can be fatal, as the rooms are generally guarded by any one of a number of unfriendly Drokon races. They don't stand around politely while you're trying to toggle, either.

Objects are represented by numbers rather than icons and the gamer must have the computer identify them before taking them. You can't just type "Take 1." This wouldn't present a problem except that that numbers act like flypaper while they are on-screen. The Cyber figure can — and will — get stuck on a number and stay there until the object is identified and taken or a Drokon beats him to a bloody pulp. The F5 key will teleport the figure to the lower middle of the screen, but this is of limited use, since it can easily teleport you into the open arms of a guard.

If you survive the first challenge, you'll be transported to the planet's surface, no doubt looking forward to some much deserved R&R. Instead, the intrepid warrior must get to the command center and repel **Space Invaders**-like waves Of enemy invaders. This section is played with the keyboard, using the ◊ and ◊ keys to move the laser cannon left and right, and the F7 key to fire. To succeed here the gamer must defeat nine waves while protecting the key defense points, such as the arsenal, and the population center, represented by a single figure to the player's right on-screen. If this figure is hit, the population drops to zero and the game ends, even though the defender "survives." No points for Pyrrhic victories.

Successfully protecting the good citizens of Cyber — and all this on one game life, mind you — moves the player on to the third scenario. Here the by-now exhausted warrior must dock his starcruiser with the mother ship to take on fuel and other necessities, then head into hyperspace to take on the entire enemy space fleet single-handedly. If this sounds like a straightforward, arcade-style space shoot-'em-up, you should know that the technical section explaining the starcruiser's features runs five pages in the program's manual.

The *Cyberworld* manual is one of the game's real positive features. The cover size is roughly the same as this magazine, and it has 15 pages of detailed explanations, hints and illustrations. There's even room for notes. The size of the manual alone ought to give some warning about the program; the player must virtually learn three different rules, to be successful.

Cyberworld is a game that will take a lot of time, patience and meticulous attention to detail just to play all the way through once, let alone master. The question is whether the frustration level is outweighed by the entertainment value.

(Louise Kohl)

TWIRLYBIRD

Designed by Chris and John Goodman
Hardwood Software, 1984/
Atari/48K/Disk/$29.95

"The subgalactic colony of Dyrinotron has been attacked for centuries by the... the... oh, the heck with it. Those silly stories never made much sense anyway... so why don't we just get right to the important stuff." So begins the promising documentation to **Twirlybird**. Unfortunately, this accurate observation is ignored and, within a few sentences, along comes as silly a scenario as you're likely to read. The game itself is not a whole lot better.

The point of the mission, uh, the game, is to locate and destroy several "vents" spewing deadly "troxaline" gas into the atmosphere. While you attempt to do this, tanks, hyperionic guns, laser pads, missile silos, force-field walls and scouts are either firing at you (very accurately, I might add) or waiting to destroy you as you fly over.

After waiting over a minute for the disk to load, I settled back with my joystick hoping for a good, rousing shoot-'em-up. I didn't get too far. After several attempts at lifting my helicopter off the launching pad had resulted in spectacular, fiery wrecks, I gave up and read the instructions. That's when I came across the bad news: this game cannot be played "settled-back-with-a-joystick" because several vital functions (including the altitude control) require keyboard input. Oh, drat.

Any joystick-based games — especially heavy action games — that require key-

board input almost invariably defeat the fun of the action. Here, the altitude controls (the A,S and D keys) are used at every part of the flight. The joystick in *Twirlybird* is used to control direction, speed and the bomb launcher. Once the desired cruising altitude has been reached (via the keyboard control), the stick is nudged forward until the player is happy with the speed, then released. No continued joystick input is required to maintain speed.

The game is challenging, but in a purely mechanical sense. Is your hand-eye coordination good enough to keep your craft out of harm's way while visually tracking your bombing efforts? It is vital to carefully calculate your bombing. Since only one or two can be released at a time, it's impossible to drop a curtain of bombs and be sure of hitting a moving target. Unlike laser and other advanced weapons, bombs take time to fall, and tend to drift forward rather than drop straight down. Since most (but not all) bomb impacts result in a visual explosion, corrections can generally be made for a more successful second attempt. Trying to do this while both you and the target are moving, however, is more a function of luck than skill.

The graphics, while okay, are not quite three-dimensional, as the game's packaging claims. Everything is seen in two dimensions, except a shadow of your craft (which moves closer or farther from you depending on altitude, a la **Zaxxon**) which is meant to add the third dimension. It did not work for me.

Most players older than 14 will probably find *Twirlybird* tiresome after the first 20 or 30 disasters.

(Mike Berger)

OLLIE'S FOLLIES

Designed by Frank Cohen
American Eagle, 1984/C-64/
32K disk/$34.95

Besides its ridiculous title, **Ollie's Follies'** only major fault is being released far too late. Two years ago it would have been a bit hit — now, it's doubtful that it will get the recognition it deserves.

Ollie's Follies is basically a climbing game with a lot of imaginative new play elements thrown in for good measure. The player's objective is simply to conquer the game's twenty-four action-packed screens, but there is nothing simple about it; you must figure out ways around a variety of tricks and traps, while avoiding deadly lightning bolts, laser beams, and a horde of menacing robots. However, the game is careful not to become too difficult — certain levels hold "energizers" which temporarily give players the ability to destroy their foes.

Each screen introduces an entirely new challenge and each challenge is excitingly different. Along with the now standard elevators, ramps and teleporters, *Ollie's Follies* requires you to ride on unicycles, dodge blasts of air from giant fans, and jump on trampolines. And that's only the first few screens.

Ollie's Follies is a high quality game with good graphics, pleasant sound effects and animation, and reasonably good gameplay. Joystick control is occasionally a bit stiff, but never enough to detract from the game. The instructions are minimal: only one paragraph of instructions and they're incomprehensible and ungrammatical to boot, but, again, this doesn't change the fact that *Ollie's Follies* is a very good game. The only question is, does anyone still want to get yet another climbing/jumping game?

(Charles Ardai)

CAVELORD

Designed by Peter Finzel
West Germany, 1984/Atari
48K Disk/$59.00

Cavelord, a West German import, is a combination of arcade action, adventure strategy and coordination. Set inside a series of huge multi-colored caverns, you must fly your winged steed through twisted tunnels and around smouldering volcanoes. Your quest: to find and return the missing pieces of the Cavelord King's crown.

Nothing less than the forces of Nature stand in your way. Those volcanoes are *active*, erupting periodically in a spray of smoke and melted rock. Some of them imitate waterfalls, splashing out a constant barrage of deadly lava-balls. Lightning bolts sizzle among the rocks, as vines sway to and fro — all of them getting in the way and slowing you down. Keeping on the move is vital as two particularly nasty, er, "Nasties" pursue you. Appearing from coalescing spheres, these bat-like creatures dog your footsteps, shooting at and ramming into you, stealing possessions and draining your life energy. A well-aimed shot will get rid of them for a while, but they keep coming back. The worst thing is that they're so erratic — a combination of Missouri mule and boomerang.

Various messages appear during your quest; indicating and updating energy and gold status. You start with 100, and each attack or disaster can rip 10 or more points away. Maintaining a high energy level is vital; hit zero and you'll have to start all over. Flying-horse lovers should be pleased though — only *you* explode!

Some passages are sealed, and require special crystals or keys (randomly distributed throughout the cavern). Question marks lie tantalizingly in wait, sometimes giving energy or gold, sometimes taking them away. Finding all of the crown takes more than just bravery; you'll also need your wits. You need gold to bribe the sentry into letting you go to the second cavern, where more mischief and dangers await. And his isn't the only palm you'll have to grease.

Each cavern has a reluctant sage who will offer some clue as to the best way to progress onward. But whether you're speaking to a dinosaur swimming in a pool of lava or a dwarf sunning himself between energy bolts, you're definitely on your own in the last analysis. But remember: your rewards will be great — if you survive.

(Marshal Rosenthal)

ROCK 'N' RHYTHM

Designed by Tom Snyder Productions
Spinnaker, 1984/C-64/Disk/$32.95

Would-be musicians can cut their own records with this computerized recording studio. The computer becomes a musical instrument — in fact, three instruments — to multi-track songs with melody, harmony and a rhythm accompaniment. An electronic jukebox plays back on command, making it ideal for kids who'd like to be recording stars.

The joystick is used to move a pointing finger to choose the settings, and the console turns into a piano keyboard with the help of a paper overlay. There are many options available. You set the volume, choose the color of the performance screen, and alter the tempo. A built-in metronome provides a steady beat. The graphic depiction of a tape recorder adds a note of realism when composers play, rewind, and replay their songs.

Musicians record by playing notes which appear on a checkerboard screen, changing band tones with the delete/insert key. The rhythm screen features a handsome drawing of a drummer with complete kit to be operated by joystick. The high hat cymbals can even be set to provide an automatic backbeat while you pound out your

own rhythm on the drums.

This program provides a lesson in how sound is composed, with the computerist changing how fast notes reach their loudest points and decay for drastically different results. The tonal quality also can be altered to create an orchestra full of instruments. Finally, the octave control moves the scale higher and lower. Combining these features in new ways produces enormously varied sounds.

The built-in jukebox has nine prerecorded songs, with room for 18 more. The compositions included are not particularly auspicious — I'd prefer some popular hits, or even old standards — but they do provide a showcase of what the program can do.

Rock 'N' Rhythm is limited compared to most music synthesizer programs (which usually also allow the musician to record and save his own compositions, but don't customarily have rhythm sections). And the paper overlay is a disgrace; it's too flimsy and seems unlikely to stay intact for very many recording sessions. While it probably doesn't matter, since the composer will quickly learn the keyboard by memory, it's a shame to see a good program saddled with such a tacky overlay.

Still, *Rock 'N' Rhythm* has a great deal of entertainment value. Anyone who likes to putter with music will enjoy this. It's a lot of fun to experiment with the sound combinations, rhythm and tempo. It's designed for youngsters ten and over, but I wager a lot of parents will use it to record their own chartbusters too.

(Joyce Worley)

MACMANAGER

Designed by Harvard Associates
Harvard Associates/
Macintosh computers/Disk/$149.95

Ever wondered what a "widget" is? Well, as President of a leading widget company, you'll have plenty of opportunity to find out! This game challenges the player to plan how many widgets to make, set the selling price, and plan a marketing budget. Money must also be spent for plant development (to maintain or increase capacity) and R&D.

The object of **MacManager** is to rack up the highest profits in the industry over the course of the game, which can last anywhere from one to 32 turns (each representing one quarter). Up to eight other companies provide stiff competition, each of which can be played by either the program or a flesh-and-blood opponent.

MacManager is a realistic business simulation game. Success or failure is directly dependent on the quality of the player's management, and it can get rough out there in widget land. If all the other companies manufacture gold-plated widgets and you employ a cut-rate price strategy, you'll probably do very well. . .but you're rarely so lucky. More typically, two or three companies compete directly for your market niche, and even surviving — to say nothing of prospering — is a challenge.

Mac owners and game fans will definitely be looking forward to more where this one came from.

What makes the game really special, however, is the superb use the designers have made of the sophisticated Macintosh user interface. If you've ever felt vaguely guilty that balance sheets and P&L statements put you right to sleep—despite living in the USA, home of capitalism — this game was meant for you. Harvard Associates (who are actually better known for business applications) have the Mac's mouse and windowing capabilities working overtime to track widget production, widget sales, widget inventory, and so forth. All this potentially brain-numbing data is organized into nifty little bar-graph flip-charts. And the Mac's superior screen resolution also gets a workout, with well-designed graphics which illustrate the current size of your plant and the status of your bank loan, among other things. All this serves to make understanding what's happening not only easy but enjoyable. (Of course "understanding" that you're about to go bankrupt is one thing, and successfully avoiding such a fate is something else again.) Those who prefer their numbers cold and hard will not be disappointed. Each turn, the "desk" contains eight updated reports, among them cash flow, P&L, operations, and general industry info.

Also on your "desk" is a copy of "MacTimes," the well-known business and financial newspaper. If there is no widget-specific news of note, "MacTimes" can be counted on to discuss such imaginative business ventures as helium-inflatable furniture or the car-of-the-month club (for the truly upwardly mobile).

MacManager is both fun to play and realistic enough to teach something about its subject. It's also one of the first games designed specifically for the Mac, and the very first one published by Harvard Associates. Mac owners and computer game fans will definitely be looking forward to more where this one came from.

(Brad Hessel)

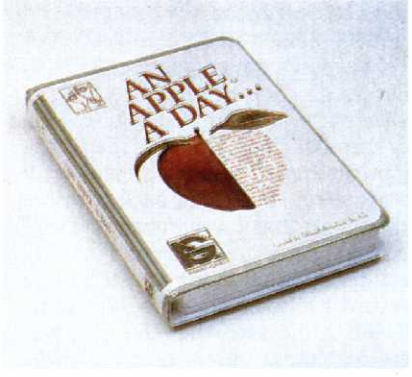
AN APPLE A DAY . . .

Created by Edward Weinstock
Avant-Garde Publishing, 1984/
Apple II/Disk/$99.95

Starting to have doubts about your doctor's competence? Here's how to test him out: get some symptoms from this program, and see if he can figure out what you've got.

In a more serious application, **Apple A Day. . .** may have some marginal utility if you do not have a data base management (filing) program: it will store the family's health records and a list of emergency phone numbers (but will not dial them). Its other primary function is to "counsel you on illness and injury." A medical data base on a second disk (included) offers "health advice" on 46 topics ranging from acne to venereal disease.

Ironically, while I had no problem accepting this application, the software publisher did. On the front of the package, a promotional blurb promises that the program "saves you unnecessary medical expenses. . . tells you when to see a doctor



and how to take care of yourself." On the back cover, in very small type, it says: "*Apple A Day*. . . is sold with the understanding that Avant-Garde is not engaged in rendering medical diagnostic services or *advice* (my emphasis) of any type." Less than three inches from this disclaimer, in type at least twice as large, it says: "Health advice helps you identify, treat, and prevent common problems. . . ." Okay, guys, which is it?

It gets worse! In the same tiny-type disclaimer, it goes on to say: "Avant-Garde gives no assurance that the information utilized in development of an *Apple A Day* . . .by its author is reliable and accurate.

Avant-Garde gives no assurance that the opinions or judgement of the author are reliable and accurate." If the publisher puts so little faith in the "reliability and accuracy" of the program, why should we? Or do we just need a "good Samaritan" law that covers software?

Browsing through the health advice section, I chose "choking" from a menu of ailments and was advised that if "the victim can speak, cough, or breathe," I should "do nothing, and let the victim cough out the swallowed object." Granted I am no doctor, but if someone can "speak, cough or breathe" it doesn't sound much to me like they are choking.

Aside from questionable counseling, most of the information presented here is fairly obvious and, in everything I looked at, very superficial. Because the program runs very slowly, looking up the same ailment in a good home medical book would probably take no longer and could, if the program required a cold boot, take less than a quarter of the time. As far as the other applications this program offers — maintaining a list of emergency phone numbers and a record of family medical histories — if you've got a filing program and know how to use it, you're probably already set.

After entering several medical records, I did a CONTROL-RESET to kick into BASIC and catalog the disk to see what files had been stored and how long they were. I deleted all the files except one, which I had accidentally named using a control character that I could not generate in BASIC. I decided to go back into *Apple A Day. . .* and delete it from there. Picking "erase a family member's file" from the menu, the program attempted to catalog the disk for a list of names, but came back with the surprising note that it was empty, and suggested that I enter a record before deleting it. Each time I attempted to write to disk the record I entered, the program came back with a message that the disk was empty and I had to enter a record. I finally used a separate utility program to delete the file. *Apple A Day. . .* was normal again.

One final quibble: according to the documentation (page 3), "to back up your records disk(s), you need a 3.3 copy program. You may need to see your dealer about this." On first reading this, I was shocked that a user-generated data disk would be copy-protected, but then realized that the documentation writer apparently did not know that the DOS system master disk includes several copy programs and that "a 3.3 copy program," in the minds of many experienced users, will sound like a pirate program. As I suspected, my system master easily copied all *Apple A Day . . .* data files.

Despite slick packaging, an *Apple A Day . . .* is of questionable utility and unquestionable shoddiness.

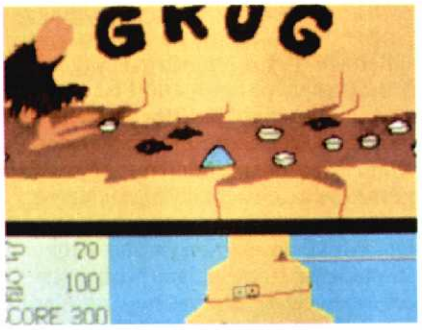
(Mike Berger)

B.C. II: GROG'S REVENGE

Sierra, 1984/C-64/Disk

Grog has always been one of my favorite B.C. characters — an essentially harmless, if preliterate, fellow, who looks like one of my former professors. Apparently he's been nursing a grudge all this time and is out to get even. With whom and for what, you might well ask. But don't expect a clear answer.

B.C. II is as successful as its predecessor in bringing us Johnny Hart's prehistoric crew in living Sunday-comics color. In addition, the play-mechanic is more challenging and there's more territory to cover. The only thing that's missing is a point to it all. In **Quest for Tires** you had to brave various



uncivilized dangers in order to rescue the Cute Chick. Not only is she missing from *Grog's Revenge*, she seems to have taken the grounds for the whole exercise with her.

In *B.C. II*, you maneuver Thor and his unicycle around a series of mountain paths. The paths are littered with blue clams, which are worth points if the cycle passes over them. The demo shows Thor on a very narrow ledge, freewheeling through moves that would make the Wallendas jealous. (I admit that I fell short of this virtuosity.) What you want to do here is accumulate clams and points, and cover as much real estate, including caves, as possible. (In the caves are walking clams for extra points and stalagmites for crashing into.) What you want to avoid are potholes, Grog and the Tiredactyls. All this takes some pretty fine-tuned joystick work.

Grog, by the way, is out clam-collecting too, and the bottom left-hand corner of the screen obligingly shows both your score and his. There's also a sort of schematic of the mountains at the bottom, which is useful for telling when sharp turns — and Grog — are coming up. You should make full use of any help you can get; it takes a while to be able to turn the first curve, much less do wheelies.

As in *Quest for Tires*, the disasters are handled with humor — you should run into Grog and Co. at least once, just to get a laugh. Falling off the side of the ledge or running into the mountain is not as funny, but you'll do it anyway. The thing that worries me is that this seems to be a game that just goes on indefinitely, as you rack up more and more points. Without a more definite goal, how do I know if I've won or lost?

(Louise Kohl)

SPELUNKER

Designed by Tim Martin and Micro GraphImages
Broderbund/Atari computers/
48K disk/$29.95

At first play, **Spelunker** seems to be just another explore-the-labyrinth contest with nice play-action and adorable graphics. But several rounds later, most players will find themselves totally absorbed by this skillful send-up of cave exploring in an action-game context.

Players are cast as spelunkers and set about spelunking in an elevator poised above the cave entrance. The on-screen explorer descends to any of several levels and begins checking things out. The corridors are quite deep and often branch into cul-de-sacs farther down. On the way, you must collect icons representing energy, dynamite (to clear out blocked passageways), flares (for routing deadly bats), magic dust and keys (many of the deeper passageways can be entered only with the right key).

The graphics, as mentioned, are first rate. Movement into the caves is accomplished via scrolling and *Spelunker* is festooned with those little touches that elevate a game such as this to near-classic status. In one sub-cavern, the explorer must board a coal car and move along the stretch of track (avoiding rocks tumbling through the overhead portals) to the other end of the cave, collect the goodies in a small alcove, then jump in the cart and zip on back.

The keyboard functions — using dynamite, flares, the ghostbuster fan, etc. — are a bit of a hassle, but that's hard to avoid when combining them with joystick control. The on-screen spelunker is, if anything, over-sensitive to player manipulation.

There's plenty of play in this game, with just enough ersatz "simulation" touches to give the action the quality of a good "Road Runner" cartoon.

(Bill Kunkel)

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* **ANSWER:** Al Hodge played Captain Video; Don Hastings was Ranger.

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By ROGER C. SHARPE

Dragon's Lair, move aside — Thayer's Quest combines quality cartoon animation with adventure-style gaming in a laservideo that's tough to beat.

THAYER'S QUEST

RDI Video Systems

It's no secret that laserdisc arcade games have not lived up to all their hype. The animated brilliance of **Dragon's Lair** was good reason to get excited about this new coin-op technology, but schlocky productions like **Astron Belt** and **Bega's Battle** proved to be a turn-off for the pay-for-play crowd. Enter **Thayer's Quest** — a laserdisc videogame of another kind.

Thayer's is a first: a computer game style adventure living and breathing inside a coin-op cabinet. Unlike every other arcade game that has preceded it, time is *not* of the essence; strategy is. You start with five lives and can take as long as you wish to make decisions. How sharp your reflexes are is of no consequence; the game simply prompts you to punch in answers using a membrane keypad lodged in the cabinet's front panel. Want to use the sword to defend yourself? Then just touch the key with the sword symbol on it, and the game continues.

What RDI has managed to accomplish within this framework is a multi-faceted, fantasy adventure that unveils an ancient land of five kingdoms where magic and wizardry reign supreme. Thayer Alconred is the last of the bloodline of the Elder Kings, the story goes — it's his quest to find five relics which conceal pieces of the great amulet of power.

Thayer starts his quest with three spells given by a kindly druse who watches over him. You, as Thayer, will have to outwit your chief nemesis, the evil wizard Sorsabel, who seeks to block your progress through deception and magic. Often, clues will be announced by the game's narrator and characters within the story, so listening as well as watching and thinking are keys to discovering the missing relics. Be sure to use your spells or items to aid other characters; this will often lead you in the right direction. Another nice touch is the game's limited speech recognition capabilities; at the outset you'll be asked your name, which subsequently will be repeated by the narrator throughout the duration of your play.

So effective is *Thayer's Quest* as a graphics adventure, you'll want to make a map while playing. This could be a problem, though — you are in an arcade after all, and quarters may very well be stacked on the panel. Suffice it to say, waiting players may not take kindly to such a practice. So, you'll just have to make mental maps as you go along.

Graphically, *Thayer's* is not as lush as *Dragon's Lair*, but is quite an improvement over the usual Saturday morning cartoon fare. But the best thing I can say about the game is that it's seldom the same. Each decision point has four branches, which leads to dozens of possible results from hundreds of choice combinations, so that events, sequences and outcomes differ with each play. Each wrong decision may not result in the loss of a life, but does count against you in the point column.

For the typical arcade gamer, *Thayer's* will come as a surprise; standard tricks of the trade won't do when it's time to really figure out your next move. For the home computer adventurer, who has long eschewed joysticks and buttons for the headier comforts of the keyboard, *Thayer's Quest* is reason enough to leave the computer behind for awhile and pass some time in the local arcade again.

(Roger C. Sharpe)

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—Mike Hally
Team Manager

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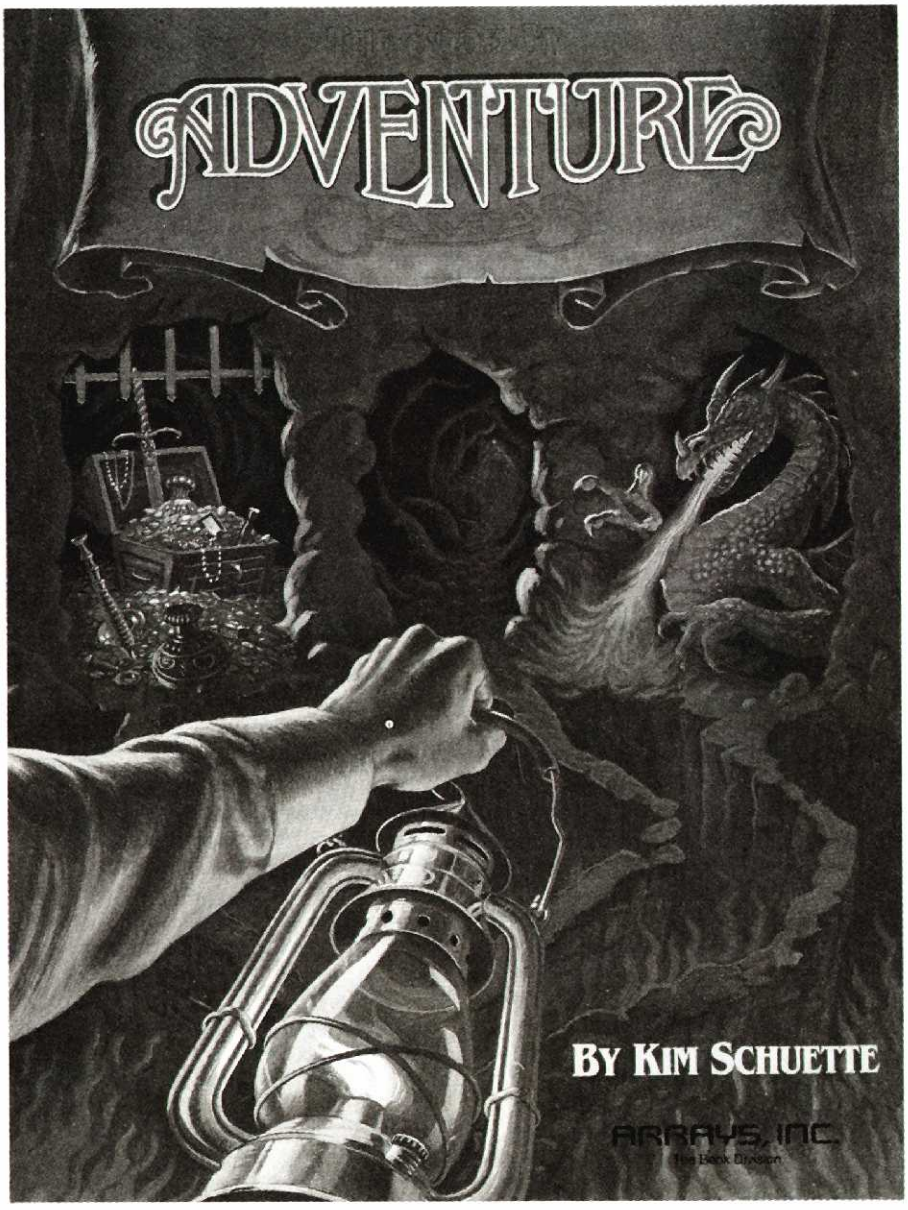
THE BOOK OF ADVENTURE GAMES

By Kim Schuette
Arrays, Inc., 1984, $19.95

This book could easily be subtitled, "Monarch Notes to Adventure Games." The first seven pages are devoted to an introduction of sorts to adventure gaming as a genre. The next 334 pages cover 77 well-known adventures — from **Adventure** to **Zork** — in alphabetical order, complete with maps and hints. The book jacket tells us that "*The Book of Adventure Games* takes the frustration — not the challenge — out of playing adventure games." This claim is open to debate — heated debate, at that. But let me straddle the fence for now, and say there are valid arguments both for and against a book of this kind.

Dedicated computer adventurers have always considered themselves a cut above people who play only arcade-type games. In supporting this position they point out that adventure games require you to think, and the vast majority also require that you be able to read. You may or may not agree with this — and certainly the implication that arcade games don't require thinking is questionable — but you can see that we are talking here about a group that takes particular pride in its logical faculties. (The really hardcore members of the group will insist on unaided logical faculties.) Just as the purist solver of crossword puzzles has nothing but comtempt for those of us who occasionally consult a crossword dictionary, adventure purists feel that having to "get a hint" is a sign of moral and intellectual weakness. Obviously, adventurers who take this strong of a position are going to see this book as a set of training wheels for mental wimps. They'll probably even call it cheating.



There's some truth to this position. In most adventure games, the map of the territory is of utmost importance; indeed, most of the fun of the adventure is finding out where all the rooms are and how they connect. So you might think that a book that gives you the entire map to start with takes that fun and a lot of the glory out of the enterprise. Well, yes and no.

I know a lot of adventure games freaks and very few of them (myself included) have never had to get a little hint or help from a friend time to time. There almost always comes a time when you've been up against the same problem for so long, with no solution in sight, that you'd really like to drop kick your computer or make an obscene phone call to the designer. If one little peek at a map or a hint gets you past this point, I say take it. What I like about *The Book of Adventure Games* is that it gives you those hints in the privacy of your own home (there's no need for any of your friends to know that you couldn't figure out how to deal with mutant grues).

As far as I can tell from the games I've played myself, the maps in this book are complete. But they tell you only the locations of the rooms, not what's inside them. I also like that the maps are separated from the hints, which lets you check to see that your own map is complete without subjecting yourself to any further temptation. The hints are pretty comprehensive,

but they don't cover absolutely everything. Even if you copied the map and followed the hints list in order, I think you'd still have to figure a few things out for yourself, but you'd probably rob yourself of the feeling of accomplishment that usually comes with the sucessful completion of a quest. Let's just say it's a matter of conscience.

—Louise Kohl

THE ART OF COMPUTER GAME DESIGN: REFLECTIONS OF A MASTER GAME DESIGNER

By Chris Crawford,
Osborne/McGraw-Hill, $14.95

Thinking of designing your own computer game? Interested in that job programming pixels and sound effects? Or perhaps you're just a connoisseur who always wanted to know what goes on inside the head of those hackers of the home computer game. In any case, Chris Crawford's new book belongs on your shelf next to the copies of **Eastern Front**, **Legionnaire** and **Energy Czar**.

Crawford, who brought us these software titles (two more — **Gossip** and **Excalibur** — are being readied for release) and who heads up the Games Research Group at Atari, has written a book that will interest both the hobbyist and the most experienced programmer. Instead of bogging down in historical facts and industry jargon, Crawford's personal and enthusiastic approach makes a conceptual and analytic book most readable.

To avoid what he terms "cyberschlock" in game design — Crawford is among an elite group of designers who have strived to raise the level of computer gaming from mindless "blast-em-ups" to a new genre of intelligent, interactive entertainment — the author outlines an ideal development process, one that emphasizes abstract goals before attempting the challenge of a clean technical structure. In the case of *Excalibur*, Crawford says he wanted to design a game about leadership. Only then did he hit upon the Arthurian legends as a good vehicle to convey his message.

While willing to criticize his own methods, Crawford finds serious flaws in the work of other designers, and he isn't afraid to say as much. In general, he argues that many special effects detract from a game's purpose by causing visual overload on the player. In contrast, "process-intensive" games, which allow the player a network of variable options to respond to different situations, are far superior to "information-rich" games that provide static data but don't interact.

Why are there so many inferior software products? Crawford believes the committee system (teams of designers and programmers who work on one project) favored by many software publishers is largely responsible for sapping the spontaneity of the design process. He also faults designers who only soup up a game's pace instead of working strategic elements into the play. The worst games, in his opinion, are those transplanted from another medium, such as dice, cards, and sports games. Crawford takes a dim view of borrowing the structure of another game and converting it for microplay. For instance, in computer craps you lose the chance to rub "luck" into the dice, which is one of many idiosyncracies that can never be translated onto computers.

Crawford is at his most technical in the chapter on "artificial smarts" (his euphemism for AI). He has devised a system to turn a computer's linear calculation powers into an associative relationship with the player. This helps the computer make qualitative judgments, such as which enemy troops should be moved where for the best tactical result. In developing universal algorithms that apply to as many circumstances as possible, he has attempted to translate these decisions into a point system, whereby each possible move by the computer is evaluated against the others.

Examining the future of the computer game industry, Crawford takes the encouraging view that if design is not approached from a creative standpoint, the result will be a vast wasteland of software collecting dust on store shelves. While he admits that no computer game has to date reached the artistic level of a Picasso painting or a Tennessee Williams' play, this book takes a big step toward defining a software aesthetic for a still-growing industry.

—Ben Templin

A TOURIST'S GUIDE TO COMPUTERS

By Dave Morice
Simon & Schuster, 1984, $7.95

In spite of its contemporary subject matter, *A Tourist's Guide to Computers* looks very much like a '60's artifact: a black-and-white cartoon book caught somewhere between Mr. Natural and Ripley's Believe It Or Not. Subtitled "A Seriously Amusing Book for Newcomers to the Electronic Age," it is intended to be an introduction to the history of computers and how they work, but only on a very simple level does it succeed.

This cartoon approach to relatively complex subjects is not new; Pantheon Books has been using it for years, covering such subjects as Marxism and world hunger. My problem with it is that I am never quite sure what audience it's aimed at. I can't help feeling that a normal adult who wants a short overview of a subject would do as well, if not better, with an encyclopedia. (At least the encyclopedia provides a bibliography on the off-chance that you'd like to read up on the subject more thoroughly.) And somehow, I can't envision a 10-year-old picking up this kind of book either. Especially one on computers, about which most 10-year-olds these days are considerably more conversant than their elders. Anybody much younger than that will probably miss some of the information and most of the jokes.

Well, that aside, I found the historical part of the book more "seriously amusing" than the trip-inside-the-microchip part, although genuine wit and even humor is difficult to sustain for almost 200 pages. Your host

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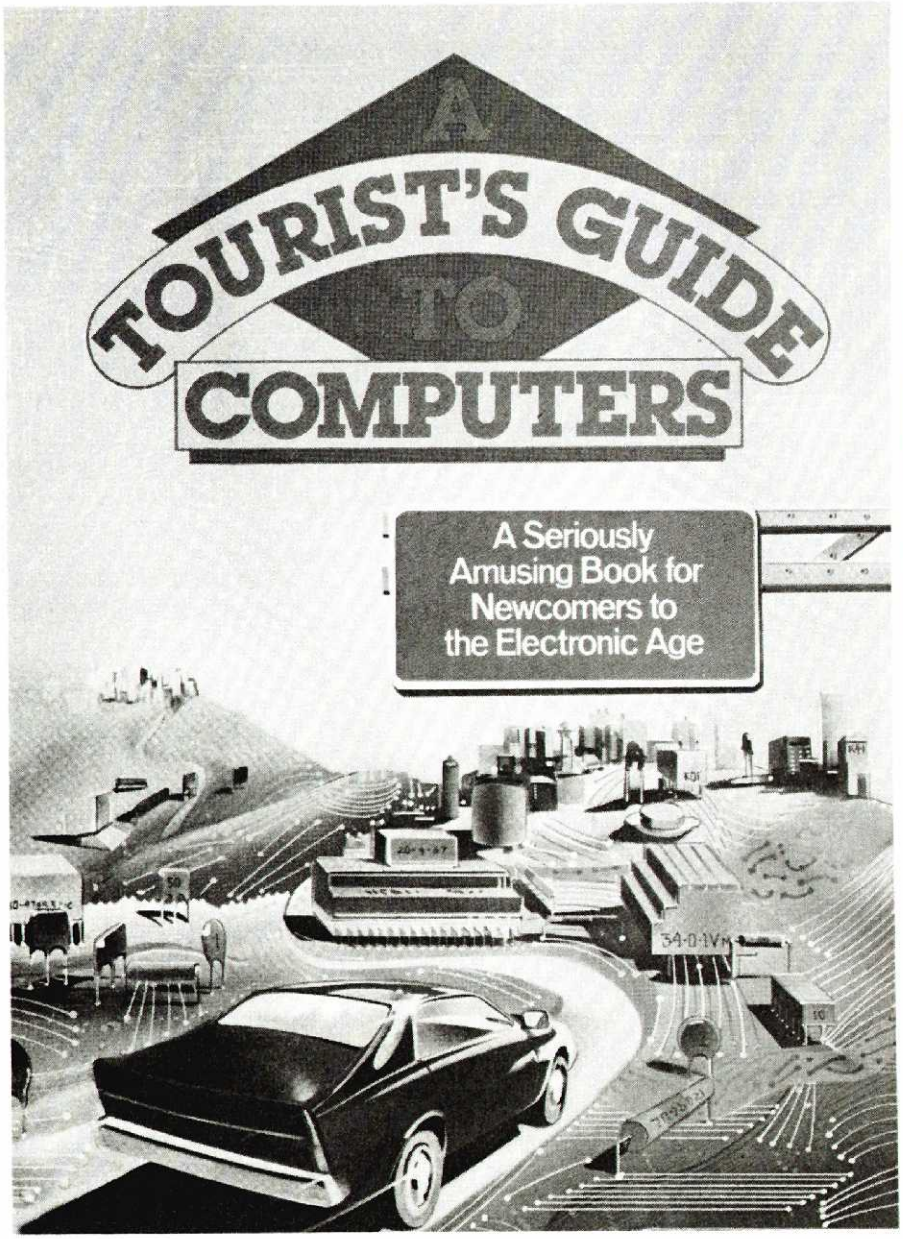
throughout the book is Professor Qwerty, a relentlessly cheerful chap in a mortarboard. I'll even admit to picking up some new information: did you know that 'calculus' is the Latin word for 'pebbles'? Or that the slide rule was invented in 1622? (If we can get enough people interested in facts like these, maybe Trivial Pursuit will come out with a computer version.)

My reasons for finding more fault with the modern section is due, I admit, to personal prejudice. I think that if you honestly want to know what goes on inside your computer, you should go out and buy all those fat technical books and buckle down. Otherwise, approach your computer like most people approach their cars: keep putting the right things into it and if it starts acting funny, take it to an expert.

A Tourist's Guide claims to be able to have you speaking the language of computerdom in no time. With computer terms proliferating in ordinary language, this is, indeed, a laudable aim, although most of us seem to have picked up a good many of these terms just reading the daily paper. You'll get a more precise handle on the language from Morice's book, so perhaps this is where a book like this can help.

A Tourist's Guide to Computers is often informative and even funny. If I knew who the readership for this kind of book was, I would recommend it to them.

—LK



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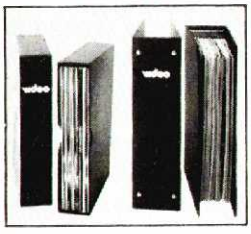

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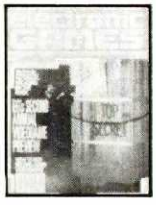

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Q&A

What You Don't Know, But Weren't Afraid to Ask.

Your disk drive is down and the error message reads like a line from *Paradise Lost*. Who do you call (or, in this case, write)? Electronic Games, of course. Starting with this column, Michael Brown will be charged with answering your most pressing gaming and technical problems.

Who is this Michael Brown? At first we believed him to be humble and unassuming, the classic mild-mannered scribe, but in recent days he has been heard boasting, without provocation: "I knew Pitfall Harry when he was still a tour guide at Disney World; I solved **Deadline** in 15 minutes; I can whip Carol Shaw at **River Raid**; my joystick arm is faster than a fleet of F15s; I'm rough, tough, badder than a pack of wolverines; I'll eat *EG* readers' problems faster than a three-dollar bucket of popcorn!"

Any questions?

Q: *Say, I've been meaning to ask you: How do I go about programming my Atari 800 in assembly language? Do you know a few programs I could buy that would let me do that? How about some good books that would help me get into assembly programming right away? Is it slow (like Basic) and complicated to learn? Would it be worth it to buy the Atari Assembly Language cartridge if I already have the Basic cartridge? And while I'm here, how's your mom?*

(Greg Wright, Massilon, OH)

A: Programs written in assembly language will run faster than nearly anything written in Basic, and sometimes dozens of times faster! It's really the only way to go if you want to write games with great graphics and fast action — but it is complicated to learn, and hard to program in until you get the hang of it. I think you can solve all your problems with one book: *Machine Language for Beginners*, By Richard Mansfield (Compute! Publications, Inc., Greensboro, NC; $12.95, paperback), which not only gives a very readable and interesting introduction to programming in assembly language for the Atari, Apple and Commodore computers, but also contains sample programs that you can try out, a tutorial on how to use the Basic USR command to insert assembly routines into Basic programs, and a complete Simple Assembler program listing (you can type it in with the aid of the Basic cartridge alone) that'll let you do simple assembly language programming without any kind of assembler cartridge. If you're real serious about this, you probably will want to get an Assembly language cart right away. If so, the Atari cart is okay; some say it's a little overcomplicated for beginners, and the manual that comes with it is full of errors. One that most game-writing professionals swear by is MAC/65, from Optimized Systems Software; it's available at most Atari software dealers, or by mail-order from quite a few places. Mom's fine, by the way; thanks for asking.

Q: *I've got this disk drive that actually goes with another computer, and I was wondering: Is there any way for me to connect this drive to my Commodore 64 without damaging either my computer or the drive?*

"EG Groupie"
(Eric Patrick, Detroit, MI)

A: You might be better off plugging it in to your Cuisinart. There are supposed to be ways to make any drive work with any computer, but all of them involve re-wiring the drive, the intervention of some kind of interface device to handle control codes and shift the wires they're sent along, or something else equally complicated and/or expensive.

Q: *I've been playing* **Ultima III** *for about five months now, and although my party is as strong as a quartet of oxen, I'm full up on gold and food and all the best weapons, and I think I've heard every clue there is, I still haven't even begun to get a clue to the whereabouts of the evil child of Minax and Mondain. What gives here? I'm really confused by the moon doors and all that jazz. Am I a dummy, or does this thing just not have any solution?*

(Carl Kapen, Hillsborough, NH)

A: Whoa there, Pathetic Fighter (or are you a Cleric? You sound like one). *Ultima III* is not endless; neither art thou a bonebrain. It's just one tough game, and you've got a bad case of Questor's Gripe. Have you been to the bottom of all the dungeons — and I mean all of them — and have you written down all the clues you've heard? If so, then pay particular attention to all the clues about the five cards and "exotics;" they're the only way to win. The moon doors are easy; they appear and disappear with the phases of the two moons in Sosaria's sky, which you can keep track of by the two numbers at the top of the graphics display. Experiment and see. I can say no more.

Q: *Hey! What happened to The Game Doctor?*

(Michael Astor, Berkeley, CA)

A: Retired to Florida on his earnings from a new treatment for Arcade Elbow. Took all his nurses with him when he went, too, so it gets kinda lonely around the office here sometimes. Last time I saw him, he'd gotten a suntan, lost some weight, and had taken up skateboarding. Claims he's not coming back, either: "Hey, all those years in medical school, the miles of Consumer Electronics Show aisles, the paper cuts from opening envelopes all day, the busted joysticks — I deserve a break!" Went off whistling the theme from **Donkey Kong** and making little compulsive joystick-twitch movements with his left hand.

Q: *I love playing games on my Apple, and I have a big collection of paddles, joysticks and other devices I use with my equally big game collection. My problem is I'm tired of having to remove my monitor, open the case, and unplug whatever I've got plugged into the controller socket on the Apple every time I want to go from using the paddle to a joystick, or vice versa. Is there any way to avoid all that hassle?*

(Steve Columbo, St. Louis, MO)

A: Sure. Southern California Research Group (Box 2231-C, Goleta, CA 93118) makes something called "Paddle-Adapple" that plugs into the controller plug inside, then provides up to four kinds of controller plugs on the other end, on a small plate that sticks on to the front of your Apple case. You can leave up to four devices plugged in, and use any or all of them at the same time — perfect for that game-playing pet octopus in your home.

Q: *I'm worried about disk drive "chatter." I hear noise when I'm loading* **Spy Hunter**, **Ultima III** *and* **Choplifter** *on my C-64. I've read that this "chatter" can knock the drive out of alignment. Is this true?*

(Mark Taormino, Van Nuys, CA)

A: As long as your drive is in alignment, no, that won't happen. (If the drive was out of alignment, you wouldn't see anything on the screen.) What's causing all this "chatter" is the copy protection stuff that written onto the disks. With copy-protected disks, the drive has to jump all over the disk in order to read them. You're probably hearing the noise when the drive is sliding down a couple of guides to get to the inside track on the disk. If you can't take the noise, then remove the cover of the drive and place a drop of mineral oil on the drive-head guides (they look like rods). But, as you probably know, do this and you void your warrantee. Your only other recourse is to bring the drive in the shop. In my opinion, a little idle "chatter" from your drive can't hurt you.

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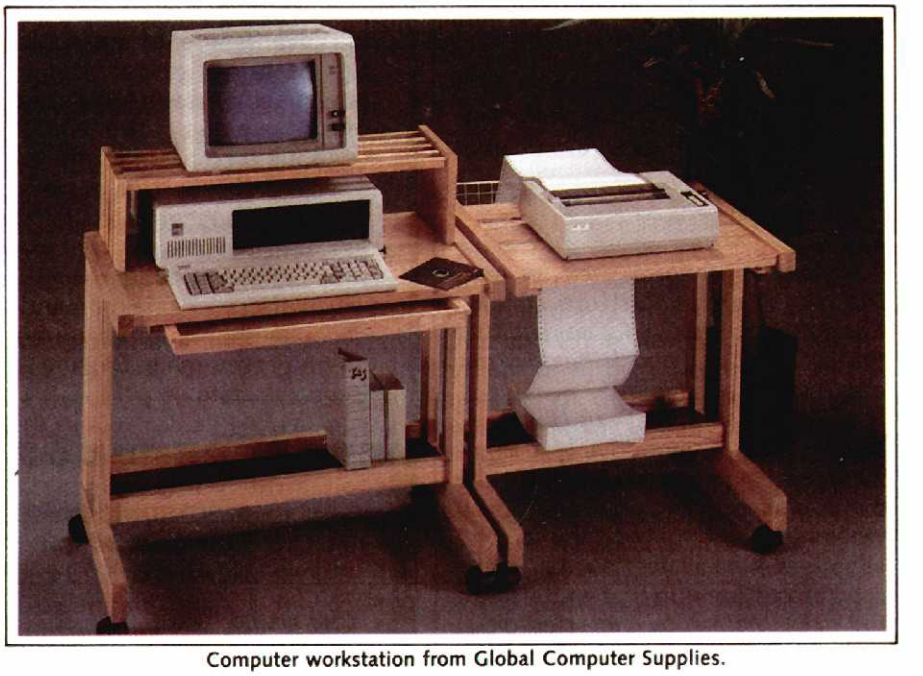
Slick Furniture Design Puts an End to Getting Computer Chaos

Many home gamers don't realize they need a computer or videogame storage center until after they've ruined a favorite disk or cartridge, or worse, had a piece of expensive equipment shatter in a fall to the floor. As computer and videogame enthusiasts spend more for hardware and software, accidents grow more costly. It only makes sense to provide a safe, convenient place to protect that investment.

Furniture manufacturers have been quick to answer the growing demand for quality electronics storage devices. The variety is almost endless, and the number of computer and videogame desks and storage consoles is growing every day. Here's a survey of what's available at computer stores, electronics dealers, and furniture stores throughout the country. Availability of specific items varies depending on your area, but you can use this as a guide to basic styles and price ranges.



Computer workstation from Global Computer Supplies.

COMPUTER DESKS

If you're planning on doing any programming or word processing on your computer, a good workstation or desk/printer table combination is essential. There's one to fit every budget, though the lower-priced units are often made of vinyl, which scratches easily and is less durable than other materials.

Bush Industries all-wood workstation.

Bush Industries, with its reputation for manufacturing high quality wood and wood veneer computer furniture, recently introduced two new models to its line. The Oak 170 Series modular furniture includes a desk, hutch, printer stand, corner connector, monitor/printer platform, and optional lockable door module. The desk (model CT-170) measures 29"H x 50"W x 28"D, and features a left-hand surface that can be adjusted to the user's most comfortable typing height. Equipment cables feed through a slot in the rear of the desktop to eliminate clutter. The desk unit has a suggested retail price of $329.95, and the matching hutch lists for $219.95. A coordinating printer stand is priced at $229.95, and computerists can complete the look with a corner connector unit for $79.95.

Bush's second new addition is the more moderately-vriced 140 series, made with acrylic-coated ebony work surfaces and pecan wood-grain laminate trim. The desk's suggested retail price is $199.95, delivering a workspace 50" wide x 28" deep and a lockable compartment on the lower storage shelf. The matching hutch (model CTA-141) has an adjustable monitor shelf with a forward/backward tilt to reduce glare. Two other adjustable shelves accommodate peripherals and software, with openings to allow for cords. The hutch retails for $119.95, and the matching printer table lists for $149.95.

IBM PC and PCjr owners who are pressed for space can store the keyboard, CPU, printer, paper, diskettes and instruction manuals in one mobile cube measuring 28"W x 26½"D x 36"H. Unlocked, Global Computer Supplies' PC Action Station opens to a width of 56". This unusual computer storage center features a slide-out shelf, drop-leaf document shelf, concealed outlet strip that lets you power all components through a single switch, and a cork message center. The unit rolls easily on its casters, and is available in either walnut or putty finish directly from the manu-

Organized

facturer for $575. For more information, write to Global Computer Supplies, 45P South Service Road, Plainview, NY 11803. A catalogue is available on request.

Furniture Concepts International manufactures a line of computer furniture made from wood solids, wood veneers, and melamine. The company's top-of-the-line Series 580 workstation consists of three attractive pieces suited to the home or home office. The desk, Model 580, measures 27½"H x 23 15/16" deep, and retails for $199.95. The matching printer stand has two six-position adjustable shelves, a rear paper feed slot, and measures 27 1/2"H x 32"W x 24" deep. Suggested retail for the table is $159.95. The triangular corner expander connects the two tables for $74.95.

Budget-conscious computer owners can save both cash and space with a scaled-down computer desk and shelf, and a matching printer table from British Design (U.S.A.) Corp., 4601 Oakport Street, Oakland, CA 94601. The table costs roughly $100 and has a high-tech, airy design. It measures 31½"W x 24½"D x 37½"H. The matching printer table costs about the same and both are made of bent wood covered with oak veneer. Shelves are laminated in black, with a bent wood veneer along the front edge.

"The Prevel Collection" is a catalogue that specializes in serving the storage needs of home computerists, featuring listings of products offered by more than 100 manufacturers. All products are shipped free of charge anywhere in the continental United States. For more information, contact Interior Design Systems, 3641 St. Mary's Place, N.W., Washington, D.C. 20007.

Competition Pro, a division of Coin Controls (known for its line of controllers for Atari, C-64, TI 99/4a and Atari 5200) recently introduced an adjustable, tilt and swivel monitor stand that can turn a full 360 degrees. High density, non-slip foam padding on the top and four 1-inch diameter rubber feet keep the stand — and your monitor — firmly in position. The monitor stand retails for $29.95, and is available from Competition Pro, Coin Controls Inc., 2609 Greenleaf Avenue, Elk Grove Village IL 60007.

Suncom's printer stand.

When space is at premium and the budget is tight, one of Suncom's printer stands might be just the thing to stretch the work area. The stand, which comes in five sizes, raises the printer off the table to allow air circulation, providing space for the paper to be stored underneath and reducing vibration and noise during use. It tilts the printer to a 35% angle to make it convenient to read copy as it rolls out. The stands sell for $18-$30 depending on size, and are made of beige vinyl-coated steel, with rubber feet to prevent damage to the desk top.

SERIOUS STORAGE FOR VIDEOGAMES

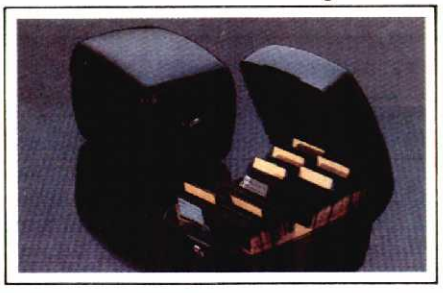
There are a number of excellent videogame carts like Pyramid's rollabout game center (model VG-100), set on twin casters. The vinyl oak finished sides and back are highlighted with a textured black top. The interior features a rack for cartridge storage, a middle shelf for instruction books, and a lower shelf that has plenty of room for accessories and joysticks. The cart stands 21" high, is 24" wide, and

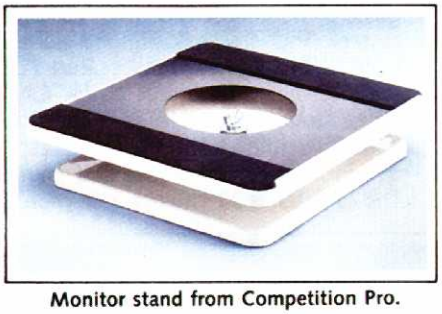
Contemporary computer furniture from Taylor Woodcraft.

Getting Organized

American Tourister case for the IBM PC.

Data Defender disk storage.





Monitor stand from Competition Pro.

11" deep. The VG-101 best accommodates the Atari 2600 console, while the roomier VG-102 is more suited to larger consoles like ColecoVision. For further information about Pyramid game carts and other gaming accessories, write to Pyramid Manufacturing, Inc., 8774 Grinnell, Detroit, MI 48213.

GAMING ON THE GO

American Tourister, well known for their sturdy luggage designs, is marketing a special line of computer carrying cases. A total of nine different hard-sided cases were specially designed to carry the IBM PC, Apple II and IIe, Franklin Ace Model 1000, and other computers. They're being sold through electronics specialty outlets, so check your local store for prices.

Cases Incorporated is marketing two videogame and home computer storage/carryalls. The EGC-400 fits the Atari 2600, 5200, Intellivision, anc ColecoVision systems, with extra space for the AC adapter, controllers, and cartridges. It can also hold a Commodore VIC-20 or Commodore 64, with accessory space left over. The model EGC-500 accommodates the Atari 400, 800, and TI 99/4a, with extra space for cassette recorders and power supplies. For details, write to Cases Incorporated, 1745 W. 134th Street, Gardena, CA 90249.

SOFTWARE STORAGE

Cartridges and disks are bound to get lost or damaged when they're carelessly strewn around the den.

To make sure you get the case that best suits your needs, take along a cartridge and try fitting the cartridge into the slot before you actually buy the storage shelf.

Data Defender, Elephant's Memory, Flip & File, and Disk Bank are just a few companies that offer durable, affordable disk storage cabinets. Comparison shop to get a better idea of what's available.

Series 580 workstation from Furniture Concepts International.

ASSURING YOUR OWN PERFECT FIT

There is no real standard of sizing yet for computer workstations. A desk and hutch that perfectly fits the sleek Apple IIc may prove too tight for the larger Commodore 64. Before you start shopping for your computer furniture, make sure to:

**Measure your computer.* This includes its length, width, and height (the latter is especially important if you want a hutch or monitor shelf). Be sure to include the space needed for the cords and plugs; these can add several inches to the dimensions required for a comfortable fit. Write down the numbers and take them with you on your shopping trip; this is one time you don't want to depend on your memory.

**Decide what you're looking for.* If you do a lot of printing, look for a workstation/printer stand combination. If you need a lot of storage space, check into models with coordinating hutches.

**Measure the space that the furniture will have to fit into.* The most elegant oak workstation will look a little silly sticking out on an angle from the wall.

**Measure your monitor, including the amount of "extra" space it takes up in the back.* This can be a factor if you want to push the computer table all the way back against the wall.

**Measure the cords that interface your computer with its peripherals.* If you'll need an extension cord, it's better to know before the computer is all set up in its new home.

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Video Emporium, Coram
Anytime Video, Deer Park
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Video Connection, Derby
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Video Quest, Elmont
Tanel Electronics, Floral Park
Video Network, Floral Park
Audio Video Barn, Blushing
Video Network Center, Flushing
Video Wizard Inc., Flushing
Magic Video, Forest Hills
Video Statio, Forest Hills
NSB Video, Franklin Square
Big Apple Video, Glendale
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Huntington Video & Computer, Huntington Sta
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Silver Dollar Coin Co., Woodhaven
Video Supermarket, Woodhaven
Big Apple Music, Yorkville

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KAY POWER

Continued from page 42

interface design and not having content behind it, his stuff could be more artificial-intelligency than you can get away with right now. He did the first branching videodisks and the first touch-sensitive displays. Many of the user-interface things over the next five-10 years will look like the things he did three to four years ago.

EG: You came to Atari with much fanfare, the recipient of an enormous R&D budget — some estimated it to be as high as $100 million — and then you could only watch as the company collapsed financially in 1983. What did you see as Atari's major problem?

KAY: The glut of stuff on the market and the public wanting higher value certainly led to the disaster. More specifically, the marketing people never understood how good a machine the 800 (computer) was. The 800 is actually a superior machine to the Apple II; Atari could've sold it for $1200. But they decided to follow Commodore and T.I. into the pit instead. Every time someone would get close, Commodore would lower their price, and T.I. and Atari would follow suit. That's a good way of committing suicide. The Apple II has an architecture that's three to four years older than the 800, runs at half the speed and still had a price of around $1200 (as of 1983). That's a marketing problem, not a technical problem. An interesting contrast is to look at the Mac, which is a machine that is rather inexpensive to make — it's mostly air inside that box — and yet it initially sold for $2500.

In the games area, Atari let Activision and Imagic in the door. What Atari should have done is distributed Activision's and Imagic's stuff, because Atari had the distribution channels. Instead, they thought they could put them out of business, which you can't do. What they should've done was move into the next phase — the service phase. That's how IBM made all its money in the '60s: It moved from the stance of selling hardware and software to selling complete solutions to people's problems in the data-processing industry. Atari missed that progression.

EG: We're back to problems and solutions again. What is it that people want to get out of personal computers?

KAY: They want something that is a bundling of hardware and software, that solves some perceived needs that they have. I personally think that the only good software that's ever been done on micros is spreadsheet software. To me, the big value in computing right now is gotten through the metaphor of editing. *VisiCalc* is basically an editing system. When the program automatically changes values in some *VisiCalc* table that's the same as when a word-processing program rejustifies a paragraph. For the ordinary person who's not interested in playing games on a machine, something having to do with editing is what will appeal to them.

EG: You once were quoted as saying, "Fantasy amplifiers are worth more to people than money, and that's my business." What did you mean by that remark?

KAY: Simply, that we can't exist without fantasy. That's not just wishing you were the prince in a castle, but the fact that we live in hallucinations of our own devising. Fantasy is whenever we go to a simpler, more controllable world. When we use language we're fantasizing — we're throwing away enormous amounts of relevant information in order to encode meaning into speech. The same with math and science. Generally speaking, we're always willing to give up detail for control. Look at the progression from theatre to movies to television to video games — where the resolution of the image decreases steadily, yet they're even more popular as you go along, because there's a higher degree of control at each level.

"... in Jamaica when they make a voodoo doll, it's exactly what we're doing when we make a mathematical model."

This may sound weird, but in Jamaica when they make a voodoo doll it's exactly what we're doing when we make a mathematical model. A model is much easier to manipulate than the real thing. These impulses to make models of things and manipulate them is built right into our genetic code — that's the way our brain was programmed to deal with things. So, whenever you make a fantasy amplifier you can win. You're asking: How does it capture? What kinds of things does it capture? What can we manipulate in it that we couldn't in the real world? *VisiCalc* is a perfect example.

EG: Of a fantasy amplifier?

KAY: Absolutely. The people who designed it thought it was going to be used for accounting, but, in fact, 75 percent of the people use it for forecasting. If that isn't fantasy, I don't know what it is. It's an amplifier for saying: What if . . .?

EG: What if, as you've previously pondered, the computer is a violin?

KAY: We always wonder about that. Though the violin can make you cry, it's not a universal instrument like the pencil or the telephone, which both were mundanely inserted into people's lives. Every communications amplifier that hasn't been ridiculously expensive has won — that includes airplanes over railroads, the Xerox over the mimeograph, and the telephone, of course. That is where you make money. Those things extract revenue simply by being in the various currents of communication. So, in answer to your question, I'll say, I suspect the computer isn't a violin, though I don't think the final verdict is in yet.

EG: In any event, people are continuing to buy personal computers at a considerable rate. How do you account for this phenomenon?

KAY: What's always been remarkable to me is how many things people are willing to buy. Purchasing a computer today is like buying a car back in 1901. You had to change the oil every 200 miles for it to work. Horses were better, but people wanted this new thing and eventually the automobile grew into something reasonable. You see that with musical instruments also. The first organs in our civilization were not musical instruments. They were just gadgets that were designed to make incredibly loud noises. Brass instruments came from hunting and war — they were signalling instruments. Eventually they found their form. And that's what's going on here.

VAPORIZE YOUR FRIENDS

Continued from page 39

tory. The action that follows justifies all of Carter's long years of effort and money. The scene and action does feel exactly like *Star Wars*. The simulation is excellent.

To lend further excitement to the action, the towers will occasionally begin hyperpulsating. That is a warning for everyone to dive for cover. The towers then flood the central areas with high intensity light inflicting heavy point damage on all warriors caught out in the open.

The piece de resistance of Photon, however, is its awesome smoke generating equipment. Every so many games, the staff will turn on the fog machine, and the entire arena will be filled floor to ceiling in dense fog. You feel like you're in the middle of Victorian London at night, with Jack the Ripper right around the next corner. When an enemy suddenly appears out of the fog, you just about jump right out of your harness!

Quite suddenly, it is over. The female voice announces the end of maneuvers and opens the exit doors. In some magical manner, several hours of subjective experi-

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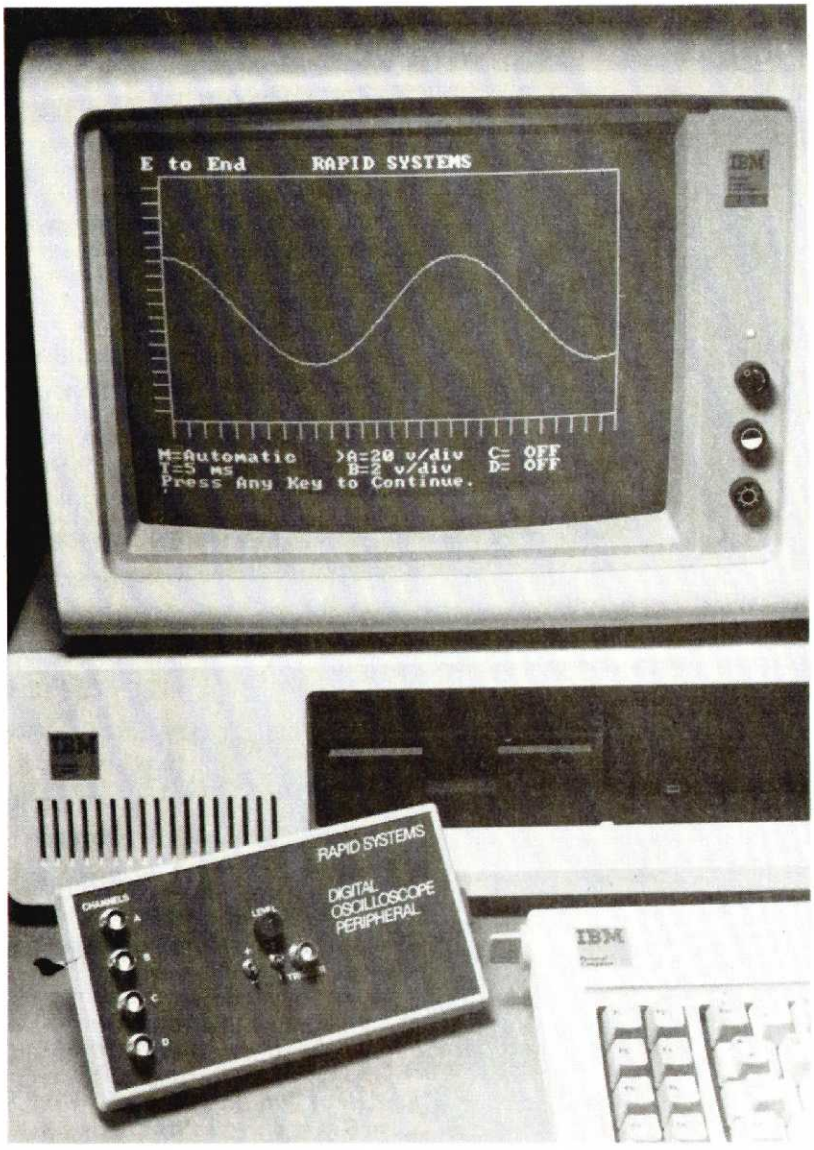

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Continued from previous page

ence have been crammed into six real-time minutes. The players walk out, clothes dripping, physically and emotionally drained. Players get a short rest while the next waiting teams go into the arena. Any who wish, may, for another $3.00, join the next round. The game is so taxing, that most players can only take two or three rounds per visit. Standing outside Photon, watching the exhilarated smiles of the players leaving the game, attests more to its success than anything else.

Steve plays Photon a lot and is usually a high scorer. "I love it," he says. "I'm here about three or four times a week. It's great fun because you can run around and work off your aggressions without hurting anyone." Steve compares it to tennis because, unlike videogames, Photon keeps you very active. "You have to be agile and use strategy to play effectively," he notes.

One of the girls who come to Photon is eleven-year-old Wendy. She finds it "like an adventure game, where different things

"Some of our best players are in their late 20's and 30's. Older players have a better developed sense of strategy."

happen, and things change from the last time you played. I like to go with my friends. It's like an outing." Wendy feels that girls can play Photon as well, if not better, than boys. "I came here with a girlfriend one time, and we beat the pants off two guys from our class who played against us."

"Dont' think only young people play Photon," say Dan Allen, Photon's Vice

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President. "Some of our beat players are in their late twenties and thirties. Older players have a better developed sense of strategy that enable their teams to score higher."

Building the Dallas complex cost $175,000. Carter noted that the money to fund Photon did not come from starry-eyed gamers, but from "a group of conservative business types, mostly real estate investors and lawyers."

Allen predicts that new franchise will be opening this spring in New York, Northern New Jersey, as well as various locations in California. Another Photon complex is slated for London. Although franchises are hardly cheap at $350,000 each, Allen is confident of their spreading out across the country, and confidently talks of 100 units within a year. "We even sold a franchise to a group in Taiwan, who will be bringing PHOTON to Southeast Asia," he says.

"This places is like our testing chamber," Allen laughs, gestering around him. "We custom-built everything in conjunction with independent designers. We're working right now on new equipment that's lighter and more streamlined. This will cut the weight down to where you'll hardly notice it at all." After experiencing what it felt like to run around a high speed carrying eighteen pounds of field gear, that is certainly a comforting thought.

"Photon is really exciting," says Allen. "It takes the great aspects of Capture the Flag and puts it into the space age. There can't be any cheating or arguments about who scored what, as the computers handle all the scoring."

"No two games are alike," he adds. "You can develop strategies and techniques, but there aren't any patterns to memorize like in videogame. You're up against the toughest, most unpredictable opponent of all — another person!"

MODEM MADNESS

Continued from page 31

change System, a computer network based in Newark, N.J. You can't imagine how serious would-be Carringtons get when they're on-line. Since every participant is a potential character and author, the plot swung wildly across the nation at the whim of whomever happened to be typing at a given time. Remarked one writer, "The worst thing that can possibly happen happened to me." What's that, I asked. "One of my characters was killed off," he replied. He was faced with the excruciatingly difficult decision of whether to create a new one, kill off someone else's character in retaliation, or both. He did both.

Some networks don't cater at all to aggressive gaming behavior. A young, smaller network, PlayNET, offers the standard parlor fare: backgammon, bridge, and Chinese checkers. The emphasis is on encouraging people to communicate and socialize rather than dream about taking out Moscow. The PlayNET system is like a clubhouse: You can wander into public "rooms" in which up to a dozen occupants can play or talk, or create a private room where you control who is admitted. "We've created a whole new kind of social network," says PlayNET's Jim Tousignant. "People are creating new lifestyles. They're becoming different people."

"We've created a whole new kind of social network . . . People are creating new lifestyles."

But it is war that brings out the darker sides of our psyches and souls, and so it is singularly unsurprising to learn that *Megawars* does just that. The physical and mental demands of interactive war gaming are rigorous, and it takes more than just hardwood nerves and split-second decision making. Take Captain Alfo, an experienced practitioner. He says, "You can't really reflect on strategy once you're behind the cockpit of a spaceship. That's when you need to let your reflexes take over." Alfo wakes up in the morning as a dentist, but he'd never let anyone know his real identity. "Can you imagine the reaction of one of my patients if he ever sat in my chair and watched me come at him with sharp, pointed instruments?" he says. The point is this: by day, our Captain Alfo is gentle, kind, even demure. He likes to think he's the type of guy to negotiate a West Bank settlement. But his nighttime persona forces him to admit that "sometimes I'd rather blast 'em than be diplomatic."

Strategy, however, is crucial, and although Captain Alfo refuses to reveal his, he says, "I sometimes sit down and plan my long-range moves out, and then I contact other friendly players by electronic mail. Good communication is one of the most important elements in maintaining a good defense."

Even in the most competitive and violent games, there is ample opportunity to plot strategy and even do some extra-battlefield thinking, like in those old World War II films where Rommel is spewing in German, "I know Patton will strike the left flank of Panzer Division Three. I know him." **SeaWars**, another CompuServe war game, has a war room where you can meet and talk with other players, including your upcoming opponents. The war room is a good place to get hints from other experienced gamers, and you can well imagine that all sorts of gamesmanship goes on there. It is a forum to posture and lie and connive; it is the central psych-out vantage point. And if you're afraid to get your submarine wet, you can always monitor the action as an observer in order to figure out who's killing whom.

Clearly, communication is crucial when it comes to telegaming. The experiences of a gamer who goes by the handle "Stillbreath" bears this out. A year ago, he logged on to Plato, a network that features 25 games, mostly of the sword-and-sorcery variety. Stillbreath found himself helplessly lost inside the seemingly endless number of rooms and corriders that make **Moria** perhaps the world's most confusing and compelling interactive maze game until he struck up a long-distance friendship with Allon.

"I learned a lot from Allon and other players," says Stillbreath, "and now I'm pretty good (at *Moria*). It took a lot of time and advice before I could become powerful."

Plato itself is a powerful interactive system that has been in existence for more than 10 years. At first it was only available for IBM-compatible computers, but recently a program was developed that allows Atari owners to access Plato. If you're anything like Stillbreath, you'll witness a personality change in yourself once you've spent a few dozen hours navigating through games like *Moria*.

Do people know about this mild-mannered bank clerk's violent alter-ego? "Nope," Stillbreath smiles confidently. "Fantasy is fun, but I keep it to myself. *Moria* is entertaining, but I try not to be fanatic about it. I know the value of money."

For someone who claims not to be fanatical, Stillbreath spends an inordinate amount of time modem-to-modem with Allon. "We travel together in the adventure and keep each other's spirits up," he says, adding: "Sometimes it's lonely being a warrior." Allon interrupts our computer-aided conversation to point out that warriors aren't all that much help at times. "There's no substitute for a good thief," Allon offers. Why would a thief and a warrior travel together? Allon chuckles, "The brawn can always go first."

Empire is Plato's answer to *Star Trek*. Thirty players can log-on at once to form four teams — the Kazari, Federation, Romulans, and Orions. Each team controls a portion of space (each player commands a spaceship), with the goal of — what else? overrunning and dominating the Universe. Communication is fast and furious, the action as spectacular as computer space war-

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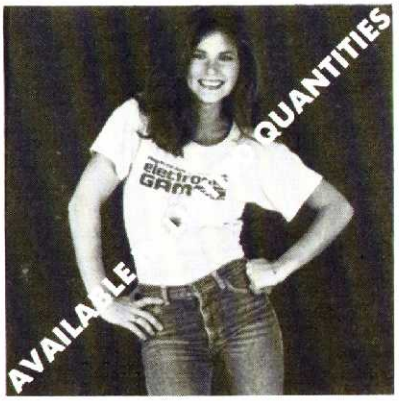

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"That's for sure," says Kranon, a veteran of many a campaign. "I wouldn't want to be in the shoes of those namby-pamby Federation types when they see me and my fellow Romulans barreling down their throats."

The Games network also tends toward the fantasy/role-playing epics. But before you get to play, you have to access the terminal program with special software, then log-on using icons instead of punching in text. At this point, the screen displays the closed doors of a Customs office. Once you're admitted, you assume control of a joystick-driven robot surrogate that journeys through a city, stopping at the Post Office (to send or collect mail), and the Social building, where the game **Spacelanes** is stored.

Set in a futuristic "Gray sector" where lawlessness is the way of the world, *Spacelanes* is monitored by an on-line referee named Pilot, who makes suggestions and arbitrates events. Pilot also is empowered to post the times and dates of *Spacelanes* sessions, giving you ample time to plan and discuss possible scenarios with fellow participants. Using the whisper mode — it allows you to speak to a selected person without anyone else knowing — we went ahead and made a secret pact with Allswell. We had been displaying open hostility towards each other the last few sessions, but apparently Allswell was ready to agree to a truce. Considering we bit off his ear during the last session, this was quite an accomplishment.

There is a bottom line to all of this collective vicarious pleasure that goes beyond flaying electronic blood and guts across your monitors, coast-to-coast. There's got to be more to telegaming. . . Consider this scenario: 200 people playing a high-gloss version of some **Dungeons and Dragons** show, where your persona has a given life span of 3,000 hours. With some kind of artificial intelligence program at work, you are reincarnated to another character; pod-like you invade another player's body.

Robert DeMarrais, ex-MIT hacker, zealous mathematician, and religious gamer, has written about telegaming: "The real key isn't simulation, but the capacity to miniaturize. Video arcade, sports arena, bridge, and chess and strategic games club; community theater, free school, and information conduit, all packaged into one enormous trip, magically compacted on a microchip."

Consider this scenario: 200 people playing a high-gloss version of some Dungeons & Dragons show. . .

As far as miniature war goes, we all may find Defense Department WOPR mainframes as easy to penetrate as it's been for those teen hackers, who would love to play Chernenko and nuke Seattle and Las Vegas. As long as the phrase "acceptable losses" permeates nuclear war vocabulary, it will remain the ultimate game for adults. Remember in *War Games* what Professor Falken said about tic-tac-toe? It's the grand metaphor, because it always ends in a tie. You just can't win.

BOOTED UP ANY GOOD BOOKS LATEY?

Continued from page 29

demon-controlled monsters. The problems that arose came partly from the fact that, because players are allowed to create their own characters to use in the game, the game script that Foster was presented with was sorely lacking in characterization and plot development. In addition, he was faced with the dilemma of having to write the book without revealing too many of the game's secrets.

"This is the hardest book I've ever had to write," said Foster. "I had to describe the game in relation to my characters and the story, without really describing the game. I had to make it work as a novel without giving everything in the game away. On the other hand, I couldn't change things, because I didn't want to do anything in the book that would directly contradict the game."

Shadowkeep is not the only Telarium game that was not actually preceded by a book; **Amazon**, written entirely by author and filmmaker Michael Crichton, has no literary ties other than those of its author, whose credits include the screenplay to *Coma* and the novel *The Terminal Man*. *Amazon*, with its highly animated, movie-style, fast-paced game sequences, is easily Telarium's most innovative game. Actually, all of the Telarium games are innovative as each one experiments with its own unique graphic and prose styles.

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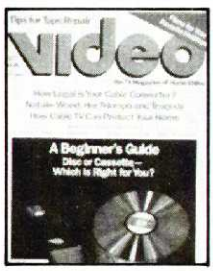

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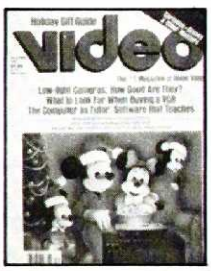

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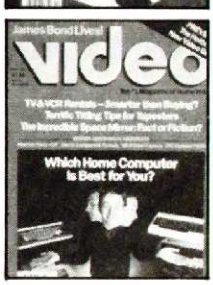

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similar in general style and presentation to the Telarium line, both being subsidiaries of Spinnaker Software. The major difference between the two is that Wyndham games are intended for young children, and so stray less from the texts that inspired them and are easier to solve. The Wyndham library includes **The Wizard of Oz**, **Under the Root**, **Treasure Island** and **Robin Hood**. In a similar vein, Quicksilva's *The Snowman* is also targeted at a young audience.

All in all, book-based adventure games are still in an experimental phase. New concepts are always arising, and changes are constantly being made. The continual evolution of the field can already be seen in the increased involvement that authors are having in all stages of game design — Ray Bradbury even wrote the packaging blurb for the *Fahrenheit 451* game.

What's ahead for this new breed of adventure game? For Telarium, the answer is simple: more author input, more animation and music, more characterization and character interaction, but fewer typical adventure game situations and fewer logic puzzles. "The games that are being designed now," says Seth Godin, "don't have any logic puzzles in them at all. In the next generation of games, staying in character is more important than anything else . . . we're constantly reinforcing in the games the character that you have to play, and by doing that, we make the player identify with that character more strongly. The ending [to *Fahrenheit 451*] is such a climax that people have called us saying that they were in tears at the end — and the reason that they were is that we forced them to believe in the character that they were playing."

For Infocom, the *Hitchhiker's* game might have been a one-shot deal — even though the game does end with the definite promise of a sequel. (If you've got the game and don't want to wait until the end to find out about this, try typing, "CONSULT GUIDE ABOUT MAGRATHEA.") The only impediment to the creation of a sequel involves the game's authors; Adams, having just finished the fourth *Hitchhiker's* book, a *Hitchhiker's* movie screenplay and this game, may want to take a break for a while. Meretsky might want to try his hand at a different type of adventure, but even if he does want to stay with science-fiction comedy, he already has a commitment to making a sequel to *Planetfall*, an adventure which many gamers feel is Infocom's best.

On the other hand, even if no second *Hitchhiker's* game is forthcoming, there's no reason for Infocom to give up the entire field of novel-based games; there must be plenty of authors who would jump at the chance to write an adventure with them. Though Infocom has announced no such plans for the immediate future, making more book-games is something that they should consider. After all, their first attempt was a success, and there is no reason to doubt that future attempts would turn out as well.

Michael Crichton, author and designer

All of the Telarium games are innovative as each one experiments with its own unique prose and graphics style.

Another entrant into the field is Synapse Software, a company long known for its arcade adaptations and popular games like **Blue Max**, whose new line of games consists of what it calls "electronic novels". Twelve of these unusual text adventures are under development, the first bunch of which are titled **Mindwheel**, **Essex**, **Brimstone** and **Ronin**. These games, while not actually based on books, are written by authors; in fact, each game comes with an incomplete hardcover novel which introduces the player to the story and the characters of the game. Also unusual is that these games are focused around character interaction and conversation rather than intuitive reasoning and logic.

The scenarios of the games are also unique. No more dull, mundane dragon slaying — the Synapse games are really original. *Mindwheel*, for instance, sends the player into the minds of a rock star, a general, a poet and a scientist in search of the information necessary to receive the *Mindwheel* and save the world. *Essex* has the player caught up in interstellar intrigue, forced into service as a messenger who has to give a secret document to the captain of a giant space world, a task complicated by the fact that the "world" has a population of 65,000 and no one seems to know where the captain is. *Brimstone* is another tale of intrigue, though this time the game takes place in various countries on Earth, a true international feel created by having foreign characters speak foreign languages. *Ronin* places the player in the midst of Japanese feudal society. At press time, no information was available about their fifth game, whose working title is *Breakers*.

Each Synapse game was written over a period of a year by a design team of the author and two programmers. *Mindwheel* and *Essex* were written by Robert Pinsky and Bill Darrah, respectively.

As for other companies, other authors and other games, only time will tell. The Wyndham production calendar includes computerized versions of Jonathan Swift's *Gulliver's Travels*, Jules Verne's *20,000 Leagues Under the Sea*, and Kenneth Grahame's *Wind in the Willows*. Harry Harrison, who used to be a commercial artist before becoming famous for science-fiction novels like *Make Room! Make Room!*, just finished writing and illustrating a game for Telarium called *Starsmashers and the Galaxy Rangers*. Also scheduled from Telarium is a game based on Roger Zelazny's *Nine Princes in Amber*.

However, as far as their long-range plans are concerned, few companies are eager to divulge any secrets. For the most part, the industry's sentiment is echoed in Seith Godin's cryptic comment that, "we've got a few things up our sleeves."

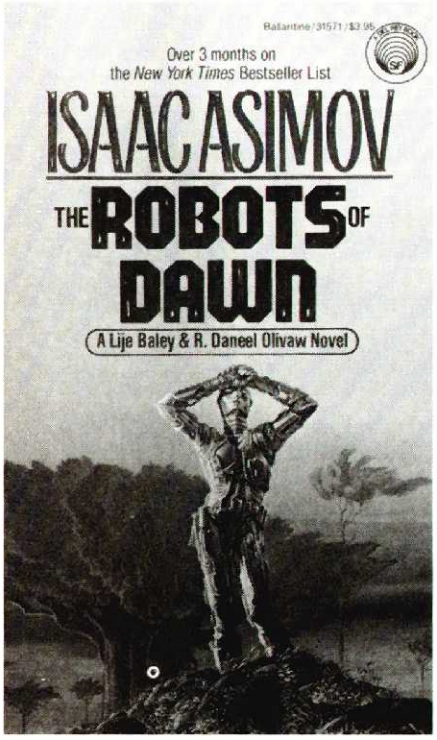
Speculation as to the nature of those "few things" leads one to wonder just what the future holds for book-based adventure games. Perhaps, as Alan Dean Foster advocates, the games will be packaged together with, or at least sold along with, the books that inspired them. Hopefully, the games will branch off into other genres besides science-fiction and fantasy; a mystery adventure by Mickey Spillane or Michael Innes, for instance, would surely have an audience, and playing an adventure dreamt up by Piers Anthony or Stephen King would certainly be a unique experience.

The future will probably see descendants of these games being used for educational purposes, maybe even to help children learn to read. Already the games that are available today are exposing computer users to books that they might never

even have looked at under other circumstances. In fact, some universities are already using Infocom adventures in remedial reading courses. All adventure games encourage reading, and gamers who would otherwise hardly give a book like *Fahrenheit 451* a second glance may be tempted to read it after playing the adventure.

Book-based interactive fiction is a whole new field of computer software that has taken the adventure gaming industry by storm. These games are entertaining, sophisticated and intellectually stimulating, while at the same time being exciting and fun to play. And though one can never predict anything with certainty in the constantly changing computer industry, it seems that these games have a bright future ahead of them. If nothing else, these games have given new meaning to the phrase "computer literacy." G

Book-based interactive fiction is a whole new field that has taken the adventure gaming industry by storm.



New Products

HUSH 80 PRINTER

Ergo Systems, $139.99

There comes a time when you not only want to save your deathless prose and programming, you also want hard copy so you can show it off. Then you start thinking about printers. One you should consider is the HUSH 80.

The HUSH 80 is a full 80-column, dot-matrix printer with up to 192 characters and symbols. It gets its name from being one of the quietest printers on the market, at less than 56 dbh. It weighs less than two pounds, has a rechargeable battery option, and fits edge-on in your briefcase, making it fully portable.

The HUSH 80 uses full 8½" thermal paper and has a condensed print mode of 160 characters per line, for times when you suddenly notice the paper is running out. It's available with Centronics Parallel, RS232 or Commodore interfaces, making it compatible with most popular computers.

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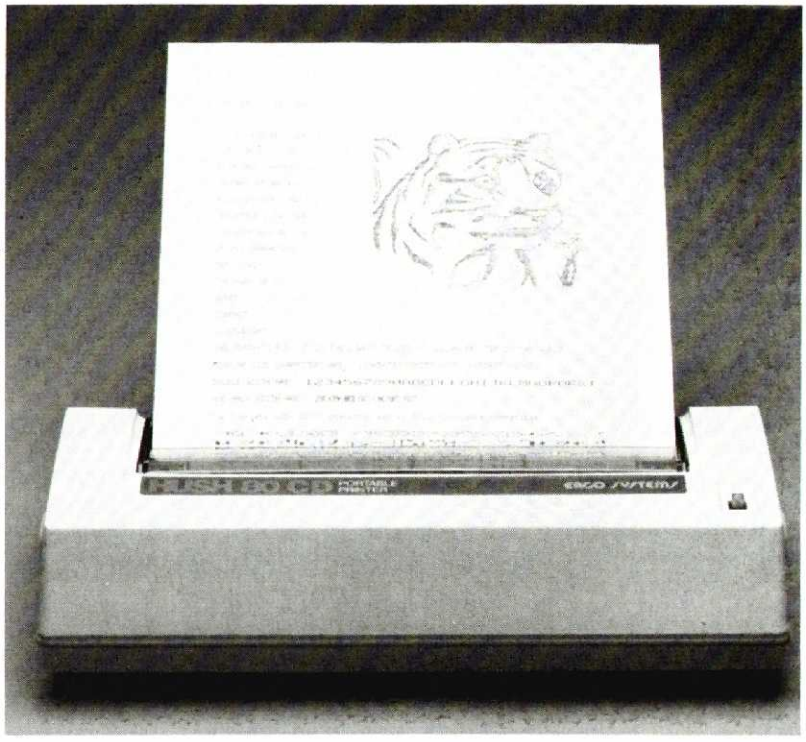


PERSONAL GRAPHICS SYSTEM

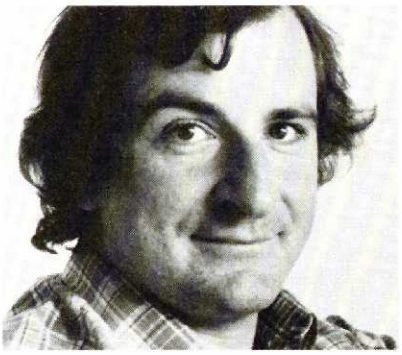
Inovion, $4495.00

The price of Inovion's Personal Graphics System can be a bit off-putting, but the company claims it has the performance capabilities of the larger systems costing $20,000. In that context, it looks like a real bargain.

The system has a multitude of options and functions including Frame Grab, to freeze TV or video signals; 32 different brushes and 16 patterns; 3-D texture capabilities; built-in software; and 250,000 colors which can be displayed simultaneously. The full palette of colors is 2.1 million. Personal Graphics System has 780K graphics memory with a 512 x 480 pixel display. It is a self-contained system that comes with a 6502 microprocessor and a 19" color monitor. Interface software for the IBM PC, Apple IIe and Macintosh is now available.

DOUG ADAMS

Continued from page 25



"I really feel the need to branch out into fresh areas and clear my head from Hitchhiker."

most avant-garde of the nation's PBS stations, even dared to show the highly subversive BBC television series.

When the third book was released in the United States, *Life, the Universe and Everything* was immediately recognized as heavy-duty philosophy. Therefore it was put on bookstore shelves right next to Carlos Castanada's latest book: *The Teachings of Ron Don: The Yankee Way to Knowledge*. Adams' third book immediately became the darling of the coffee table set. They, in turn, had to rush out and buy the first two books since the third one made no sense without reading the others first (Now that really is profound.)

Douglas Adams was (and is) an international celebrity. His U.S. tour was a great success as he was lionized from coast to coast. So delighted was he with the overbearing American hospitality, tedious talk shows, and unending dinner speeches that he titled his fourth (and supposedly final) *Hitchhiker* book, *So Long and Thanks for All the Fish*.

What to do next? Let's see...books, records (of the radio shows), television, stage play (Off-Off-Off-Broadway. Liverpool perhaps, or maybe it was the Orkneys), even the obligatory movie contract. "Say", said Adams one night, in a not-so-drunken stupor, "How about a computer game version!" (The difference between doing a game or a book, Adams says, is that "A game is fun. A book is staring at a piece of paper until your forehead bleeds."

A quick marketing survey showed him that a small adventure game company in Cambridge, MA (note the auspicious location, heavy Karmic influences, and Freudian overtones) named Infocom owned the entire computer text adventure field. In fact, Douglas' first introduction to Infocom was through playing **Suspended**, one of the company's most mind-boggling games. (Yes, he solved it.) It occurred to him that here was a company with minds as devious and eccentric as his own. He decided to approach them about *Hitchhiker's*. Little did Adams realize that Infocom was actually only leasing the highly lucrative field from the Gnome of Zurich. In fact, a check with the Frozboz Chamber of Commerce would have revealed that Infocom was in fact a front for a vast Underground Empire. Many an adventure game player had disappeared forever into its clutches; their jobs, families, and sanity ensnared by slavering Grues. The few that escaped usually wandered around saying "Hello, sailor," of "Frotz," and carrying a strangely familiar lamp. The Chaucer of

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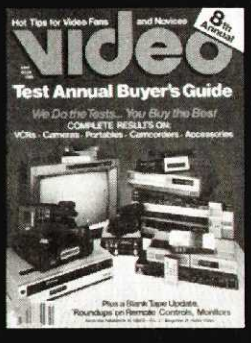
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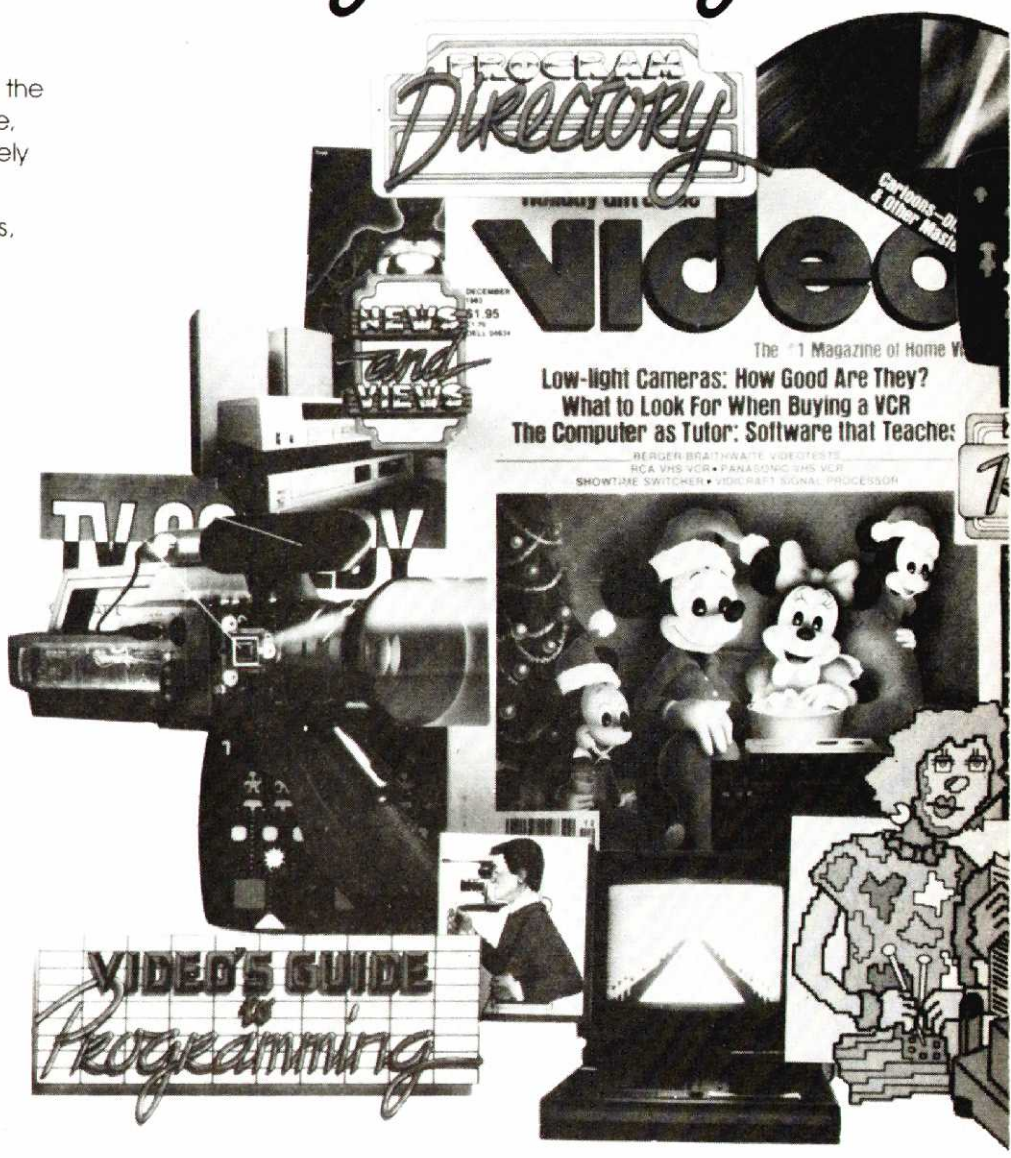
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British humor was about to meet the dreaded Masters of the Purple Prose.

Initial contact was made ethereally through a transoceanic computer bulletin board. Further discussions were held in a variety of British pubs. It is even money that one of them must have been The White Hart in London; so appropriate with Arthur C. Clarke's personal table in the far corner, right next to the cheese sandwiches. Another creative locale was Huntsham Court, a hotel in the village of Huntsham, near Tiverton, Devon. Adams wrote *So Long and Thanks for all the Fish* there, and a lot of the electronic version of *Hitchhiker's* as well. He also bought part of the establishment. How did that come about? "One night after a few drinks," says Adams, "it seemed like a good idea."

Adams insisted on only dealing with the game designer who had the greatest stature in Infocom. Steve Meretzky, at 6'4" was taller than Marc Blank, so he was drafted.

Meretzky was one of Infocom's early playtesters, and suffered from a terminal case of "Boy, game design is a snap. Why, even I could do a better job in a few weeks than...." So, being highly sadistic, Infocom gave Meretzky a chance to design a game. Somehow the few weeks evolved into over a year, but much to everyone's amazement (except Meretzky's), the game was fantastic. Who can forget Floyd's tragic death? **Planetfall** earned Infócom a whole shelf full of Best Game awards for that year.

Even with Meretzky's heavy credentials in computer game design (*Planetfall* and **Sorcerer**, another stellar scenario), he found it difficult to see eye-to-eye with Adams on every aspect of the game design. (The rumor is that Adams' real height is being kept a media secret in the U.S., because of his literary agent's fears that Adams will be shanghied by the Boston Celtics and never write again. He admits to 6'5".)

Luckily for computer adventure fans, the design did not become a battle of the Giants. Mutual respect was earned by the exchange of outrageous jokes, a similar fondness for wearing bizarre costumes (you must see Meretzky in his gorilla suit at some party), and sporting eye-blinding clothing. Adams is infamous for his day-glo ties that add new meaning to the phrase Contact High. Meretzky counters this with a collection of Dali-like Hawaiian floral sport shirts. These are the same shirts made famous by Americans traveling overseas in the 50's and 60's before the Geneva Convention ban on visual warfare.

The peril-sensitive sunglasses that were developed for the computer game are actual replicas of those worn by staff members who had to sit in on lengthy conferences when both Meretzky and Adams were present. In fact, almost all the goodies enclosed with the game originally had other uses: The fluff was really used for earplugs to deaden the impact of the puns. The official destruct orders were actually coded hit contracts on Adams and Meretzky put out by the bedraggled playtesters. The baggy containing the microscopic space fleet looks suspiciously like the bag provided by the airlines in each seat for heavy flying. The sales brochure is really Adams' dummy Swiss company that sells digital watches on late night television (remember the Gnome of Zurich). The Don't Panic button is, of course, the Unimportant Red Button (can you find the Important Green Button in the packet before the Earth blows up?).

The only thing in the game package that is what it seems to be is the "No Tea." Historians have long claimed that the entire expansion of the British Empire was based on the search for a real cup of tea. To date, they have only found Advanced Substitute Tea, which explains the fall of the Pound, the Falklands, the coal mine strike, and Stonehenge.

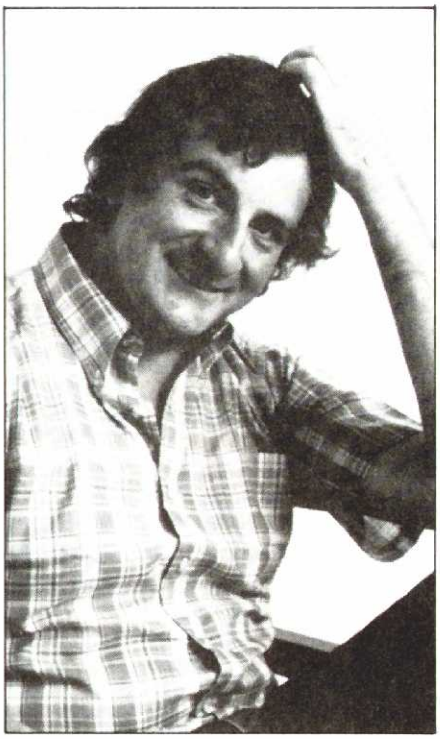
A few people in the Himalayas have written in and asked whether or not they could enjoy playing the computer game without having touched the books, seen the TV shows, felt the play, heard the records, or smelt a computer overheating from twelve hours of obsessive playing. To which Adams responded, "42!"

He further noted, "The game design is essentially pear-shaped. After the beginning player gets comfortable running around the narrow neck at the beginning, the bottom drops out." What an understatement! With the babel fish problem, the game shifts into really high gear. Many a seasoned player has been stumped here for hours. It does not help that *Hitchhiker's* is, in Adams' words, "the only game that deliberately lies to you."

Adams, however, has taken pity on those less brilliant and warped—over Meretzky's pleas to "let them suffer." For the first time, an Infocom game actually has hints to solving some of the puzzles built right into the game itself. Admittedly, they are mostly obscure, but nonetheless actually there. A perceptive adventurer will spot the clues quickly, but even the most dilettante player can grasp them, if they read all the text very carefully, and can visualize the entire floorplan of a typical Vogan space ship (copies of the floorplans are available from the traveling bookmobile run by Wowbagger the Infinitely Prolonged).

The game ricochets all across the universe in a bewildering kaleidoscope of improbable pasts, presents, and futures. The scenario design resembles a galactic pinball game. Watch out for the Black Hole or you may never get out again, and remember to be careful what you say and do. In Adams's universe causality is paramount. A stone thrown here blows up planets over there.

Meretzky and Adams have designed Infocom's *Hitchhiker's Guide to the Galaxy* as really an artificial intelligence test. They will find out just how artificial your intelligence really is. Try to deal with entire ship equipped with Sirius Cybernetics Corporation devices, whose motto is Share and Enjoy. This is usually considered sufficient cause through the galaxy for immediate self-destruction in order to save your sanity. See how good you are at cheering up Marvin, who is a manic-depressive robot. Need to open the screening door? Easy, just show it a little bit of intelligence. The clue to salvation may just be the "thing" your Aunt gave you that you can not get rid of no matter how hard you try. Then again, maybe not. At the bottom of Adams's pear is the jammed



"The game design is basically pear-shaped. After the player gets comfortable running around the narrow neck at the beginning, the bottom drops out."

hatch puzzle, This puzzle will grow on you until it takes over your mind. Beware the Jabberwocks!

Now that Adams has conquered this new medium (the game is already in the top ten on the overall charts), what are his plans? Will he do *Son of Hitchhiker*, or *Hitchhiker, Parts II-XXV*? "No," says Adams, "I really feel the need to branch out into fresh areas and clear my head from *Hitchhiker*. I certainly have enjoyed working with Infocom and would very much like to do another adventure game, but on a different topic." Adams compares adventure games to movie-making in the early 1900's: "It's a real novelty medium and only the people doing them really know how great they are."

Sitting across the breakfast table from Meretzky and Adams is difficult indeed, even wearing the peril-sensitive sunglasses. The air between them seems to shimmer and blur. At times they bear a startling resemblance to that maestro of self-expediency, Zaphod Beeblebrox. The two heads seem to share the same body. Perhaps Zaphod is the end result of the cloned collaboration.

"Remember," says Adams, leaning over like a conspirator while chuckling diabolically, "To *share* the real feeling of the game, *enjoy* everything."

So, now that you have stayed up all night and have solved six impossible puzzles this morning, why not round it off with breakfast at Milliway's. Go ahead. If you have just finished this computer adventure game, you have definitely earned it!

New Products

MITEY MO

CDI, $119.95

The goal of the technological revolution seems to be to make everything as small as possible. First computers shrunk from the size of tall buildings to the size of a typewriter, then calculators got so small you could mistake them for a credit card, and now Computer Devices International has come out with a new modem for your Commodore 64 that's half the size of any other on the market. It may

be small, but CDI says that the Mitey Mo has features that Commodore's own 1650 Automodem lacks, such as auto redial, menu drive, 28K buffer and single switch operation. The Mitey Mo also gives you 14 pages of memory to store data for review or printout later. CDI backs their claims for the Mo's greater reliability with a full one-year warranty.

CDI/Computer Devices Int'l
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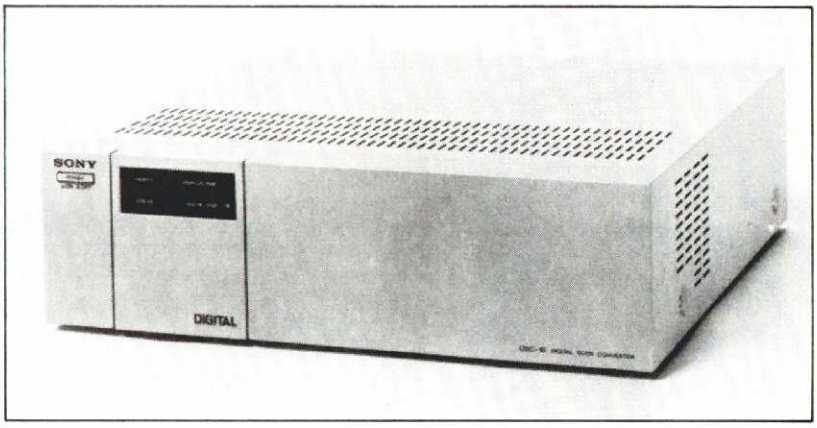

DIGITAL SCAN CONVERTOR

Sony/price unavailable

Among Sony's latest innovations is this set-up: The 13-inch "multi-scan" monitor combined with the digital scan converter that doubles the number of scanning lines from the standard 525 to 1050. When connected to an RGB personal computer (IBM PC and PC compatibles, for example), the scanning frequency jumps from 15.75kHz to 31.5kHz. What this all means is that video images are brighter, finer-grained and higher in resolution with these two products attached to your computer than ever before.

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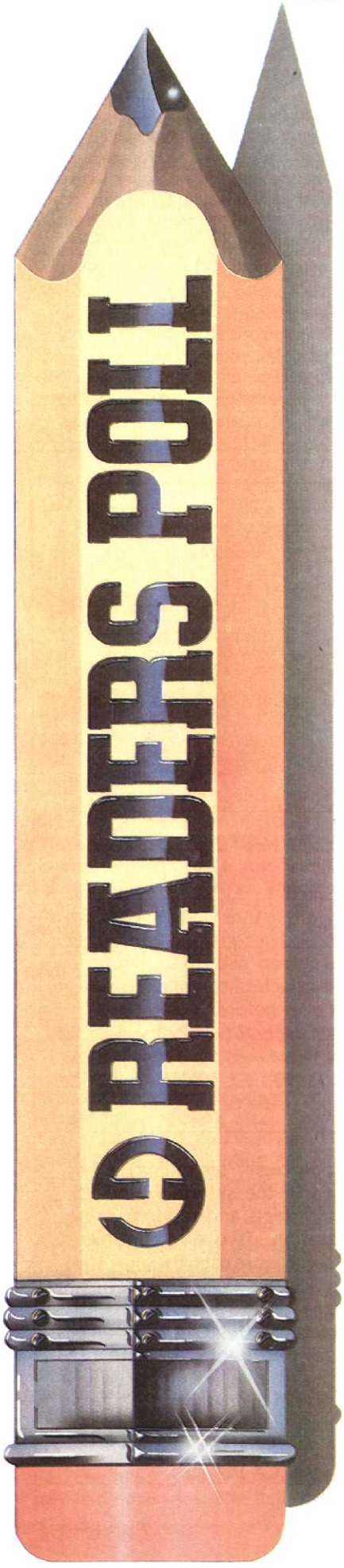
SUPERMICRO

HomeComputer Software, $59.95

In the beginning, there were hand-held electronic games. But video game systems and computers came along and people put their hand-held gizmos away. HomeComputer Software is hoping to change a few people's minds with its programmable stand-alone system that fits into a palm and accepts a number of cartridges. SuperMicro's "state-of-the-art" L.C.D. and double-microprocesser technology is reflected in the system's graphics, sound effects and random game generation. Two disc controllers and six keys are used to control the action. So far, there are three cartridges: **Alladin's Adventure, Reactattack** and **Outflank** — all strategy adventure games. A fourth cartridge, the **LightPak**, lets you play in the dark.

HomeComputer Software, Inc.
1035 Saratoga-Sunnyvale Rd.,
San Jose, CA 95129.



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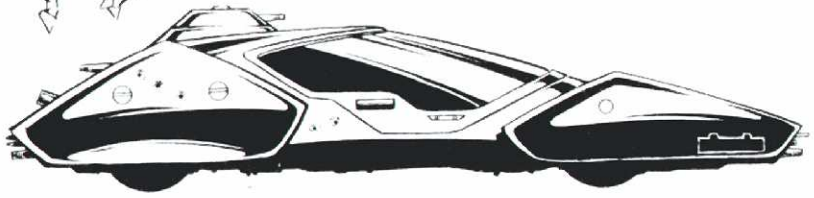

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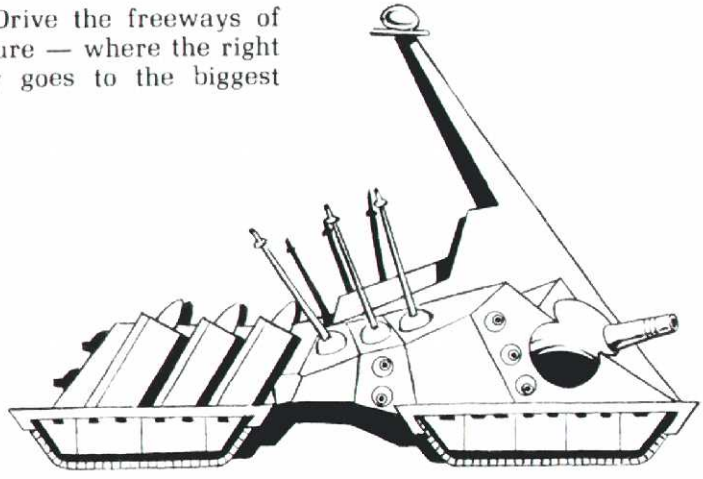

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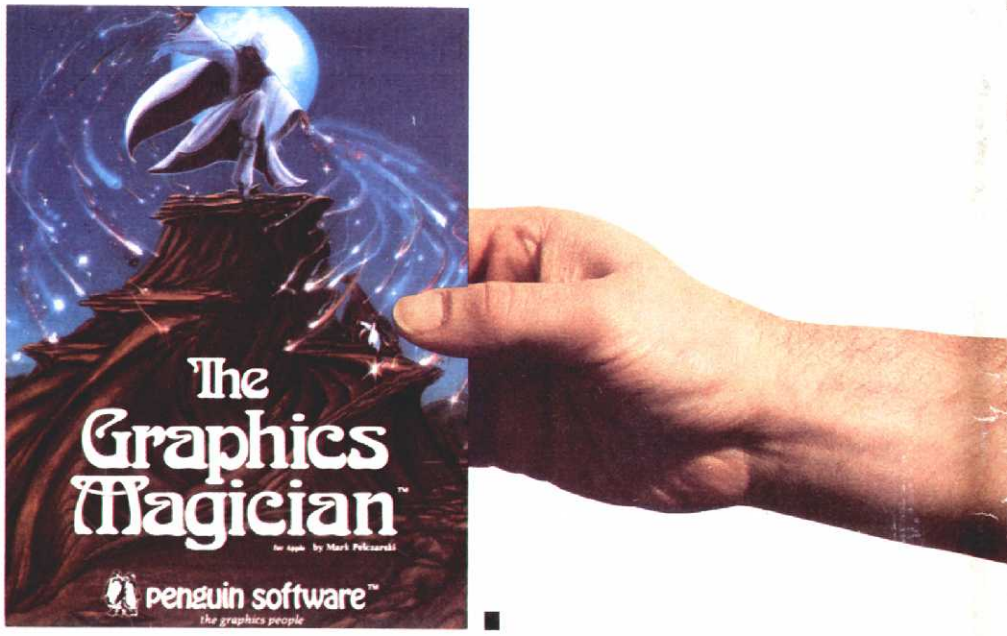

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